#### => d his

L39

1 S 2615-15-8

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(FILE 'HOME' ENTERED AT 07:33:28 ON 24 MAR 2005)
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                E DJACZENKO/AU
             38 S E4,E5
1.2
                E STRUMILLO/AU
1.3
              3 S E8, E12
                E FAVA D/AU
              5 S E3-E5
L4
L5
             14 S 5 METHYL 2 1 METHYLETHYL CYCLOHEXANOL
L6
              2 S L5 AND 1 ALPHA 2 BETA 5 ALPHA
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L7
L8
            435 S C10H20O/MF AND 46.150.1/RID AND 1/NR
L9
            213 S L8 AND CYCLOHEXANOL
L10
            29 S L9 AND 5 METHYL
            17 S L10 AND 2 1 METHYLETHYL
L11
L12
            15 S L11 NOT LABELED
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L13
            16 S L7,L12
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            14 S L10 NOT L13
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          10732 S MENTHOL
L20
          12031 S L5, L6, L18, L19
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L22
              1 S 69-72-7
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L24
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L25
             29 S L20 AND L23, L24
L26
          24150 S L22
L27
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L30
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L31
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L32
            19 S L31 AND L23,L24
L33
            325 S L31 AND L26, L27
L34
              8 S L28,L33 AND L25,L32
L35
              8 S L29, L34
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L36
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L37
              1 S 9002-89-5
L38
             1 S 112-60-7
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L40
             4 S 124-94-7 OR 378-44-9 OR 83-43-2 OR 50-02-2
L41
              1 S 64-17-5
L42
              1 S 7647-14-5
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L43
L44
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L45
L46
             2 S L35 AND (TETRAETHYLENEGLYCOL OR TETRAETHYLENE GLYCOL OR TETR
L47
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             2 S L35 AND ?CORTICOSTER?
L48
L49
             1 S L35 AND (TRIAMCINOLON? OR BETAMETHASON? OR BETA METHASON? OR
L50
             5 S L35 AND (ETOH OR ETHANOL OR ETHYLALCOHOL) OR ETHYL ALCOHOL)
             3 S L35 AND (NACL OR (NA OR SODIUM) () CHLORIDE)
L51
L52
             3 S L35, L43-L51 AND PHARMACEUT?/SC, SX, CW, BI
L53
             1 S L2-L4 AND L20,L31
L54
             3 S L1, L52, L53
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L55
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                SEL RN
L56
            355 S E1-E15/CRN
L57
              0 S L56 AND 76-03-9/CRN
L58
              4 S L56 AND 69-72-7/CRN
=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 08:03:57 ON 24 MAR 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 24 Mar 2005 VOL 142 ISS 13 FILE LAST UPDATED: 23 Mar 2005 (20050323/ED)

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

# => d 154 all hitstr tot

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L54 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN
     2003:173431 HCAPLUS
DN
     138:226721
ED
     Entered STN: 07 Mar 2003
ΤI
     Pharmaceutical composition for preventing drug abuse by
     producing mucous membrane irritation
IN
     Joshi, Yatindra; Somma, Russell
PA
     Novartis AG, Switz.; Novartis Pharma GmbH
     PCT Int. Appl., 18 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
    English
```

```
IC
    ICM A61K031-4458
     ICS A61K031-137; A61K047-00; A61K031-4458; A61K031-19
CC
    63-6 (Pharmaceuticals)
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    PATENT NO.
                              DATE
                        KIND
                                        APPLICATION NO.
                                                           DATE
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            LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG,
            SI, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,
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                                                                20010830
    US 2003147975
                        A1
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                                         US 2003-385372
                                                               20030310
PRAI US 2001-942809
                        Α
                               20010830
CLASS
             CLASS PATENT FAMILY CLASSIFICATION CODES
PATENT NO.
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WO 2003018015 ICM
                       A61K031-4458
               ICS
                       A61K031-137; A61K047-00; A61K031-4458; A61K031-19
                       A61K009/00M18B; A61K009/20H4; A61K009/48H4
US 2003049272 ECLA
US 2003147975 ECLA
                       A61K009/00M18B; A61K009/20H4; A61K009/48H4
    A pharmaceutical composition which reduces or eliminates the drug
     abuse potential of central nervous system stimulant comprising: (a) a
    central nervous system stimulant selected from the group consisting of
    methylphenidate, amphetamine, methamphetamine, and combinations thereof;
    and (b) a mucous membrane irritant selected from the group consisting of
    organic and inorg. acid, salt, ketone, nitrite, sulfide, bisulfate,
    persulfate, glycerophosphate, hypophosphate, borate, titanate, amino acid,
    peptide, and combinations thereof, wherein the mucous membrane irritant
    produces, irritation when contacted with the skin or mucous membrane. The
    present invention is based on the discovery that a central nervous system
    stimulant, such as methylphenidate, in combination with a mucous membrane
    irritant, such as citric acid, reduces or eliminates potential drug abuse
    by producing "irritation" when contacted with the dermis layer of skin or
    mucous membrane, and thus, prevents nasal absorption and/or injectability
    of the drug. Formulations of chewable tablets containing 2.5% methylphenidate
    and 10% citric acid is disclosed.
    pharmaceutical drug abuse CNS stimulant mucous membrane
    irritation
IT
    Balsams
    RL: ADV (Adverse effect, including toxicity); BUU (Biological use,
    unclassified); BIOL (Biological study); USES (Uses)
       (Peru; pharmaceutical composition for preventing drug abuse by
       producing mucous membrane irritation)
IT
    Drugs of abuse
       (abuse of; pharmaceutical composition for preventing drug abuse by
       producing mucous membrane irritation)
IT
    Quaternary ammonium compounds, biological studies
    RL: ADV (Adverse effect, including toxicity); BUU (Biological use,
    unclassified); BIOL (Biological study); USES (Uses)
       (alkylbenzyldimethyl, chlorides; pharmaceutical composition for
       preventing drug abuse by producing mucous membrane irritation)
IT
    Drug delivery systems
       (capsules; pharmaceutical composition for preventing drug abuse by
       producing mucous membrane irritation)
ΙT
    Drug delivery systems
       (emulsions; pharmaceutical composition for preventing drug abuse
       by producing mucous membrane irritation)
```

IT

Drug delivery systems

(granules; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Acids, biological studies RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (inorg.; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) Acids, biological studies TT RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (organic; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) ΙT Capsicum Irritants Mucous membrane Nervous system stimulants Podophyllum (plant) (pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Amino acids, biological studies Carboxylic acids, biological studies Coal tar Ketones, biological studies Peptides, biological studies Salts, biological studies Titanates RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pine; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) ΙT Drug delivery systems (powders; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Drug delivery systems (sachets; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Drug delivery systems (solids; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Drug delivery systems (solns.; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Balsams RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (storax; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Drug delivery systems (suspensions; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT Drug delivery systems (tablets, chewable; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) ΙT Drug delivery systems

Balsams RL: ADV (Adverse effect, including toxicity); BUU (Biological use,

producing mucous membrane irritation)

IT

(tablets; pharmaceutical composition for preventing drug abuse by

unclassified); BIOL (Biological study); USES (Uses) (tolu; pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) 50-21-5, Lactic acid, biological studies IT 51-21-8, Fluorouracil 56-25-7, Cantharidin 57-03-4 64-17-5, Ethanol, 67-63-0, biological studies 64-19-7, Acetic acid, biological studies Isopropanol, biological studies 69-72-7, Salicylic acid, biological studies 76-03-9, Trichloroacetic acid, biological studies 76-22-2, 77-92-9, Citric acid, biological studies 79-10-7, Propenoic Camphor acid, biological studies 79-14-1, Glycolic acid, biological studies 89-32-7, Pyromellitic dianhydride 89-05-4, Pyromellitic acid 89-78-1, Menthol 90-64-2, Mandelic acid 90-80-2, 94-36-0, Benzoyl peroxide, biological studies Gluconolactone 96-26-4, Dihydroxyacetone 97-59-6, Allantoin 108-46-3, Resorcinol, biological 108-95-2, Phenol, biological studies 110-16-7, Maleic acid, biological studies 118-56-9, Homosalate 123-19-3, Dipropylketone 127-07-1, Hydroxyurea 127-17-3, Pyruvic acid, biological studies 131-53-3, Dioxybenzone 139-33-3, Ethylenediaminetetraacetic acid disodium salt 144-55-8, Sodium bicarbonate, biological studies 302-79-4, Retinoic acid 518-28-5, Podofilox 526-83-0, Tartaric acid 526-95-4, Gluconic acid 1143-38-0, Anthralin 1310-58-3, Potassium hydroxide, biological studies 1321-11-5, Aminobenzoic acid Octyl methoxycinnamate 6915-15-7, Malic acid 7446-70-0, Aluminum chloride, biological studies 7647-14-5, Sodium chloride, biological studies 7697-37-2, Nitric acid, biological 7722-84-1, Hydrogen peroxide, biological studies 7761-88-8, Silver nitrate, biological studies 8029-68-3, Ichthammol 11129-12-7, 14797-65-0, Nitrite, biological studies 14996-02-2, Bisulfate, 15092-81-6, Peroxydisulfate ((SO3)2022-) biological studies 18496-25-8, Sulfide 16566-52-2, Hypophosphate 56093-45-9, Selenium 85791-94-2 92348-62-4, Hydroxy octanoic acid sulfide 70424-62-3 500717-39-5, 2,4,6,8-Nonatetraenoic acid 126094-21-1 201596-35-2, EP02 500718-56-9 RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) IT 113-45-1, Methylphenidate 300-62-9, Amphetamine 537-46-2, Methamphetamine RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) RE.CNT THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD (1) Alza Corp; WO 9962496 A 1999 HCAPLUS (2) Chungi, S; WO 0059479 A 2000 HCAPLUS (3) Dariani, M; US 5908850 A 1999 HCAPLUS (4) Mantelle, J; US 6210705 B1 2001 HCAPLUS (5) Pozuelo, J; US 4117161 A 1978 HCAPLUS IT 64-17-5, Ethanol, biological studies 69-72-7, Salicylic acid, biological studies 76-03-9, Trichloroacetic acid, biological studies 89-78-1 , Menthol 7647-14-5, Sodium chloride , biological studies RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pharmaceutical composition for preventing drug abuse by producing mucous membrane irritation) 64-17-5 HCAPLUS RN

CN

Ethanol (9CI) (CA INDEX NAME)

 $_{\rm H_3C-CH_2-OH}$ 

RN 69-72-7 HCAPLUS

CN Benzoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)

RN 76-03-9 HCAPLUS

CN Acetic acid, trichloro- (8CI, 9CI) (CA INDEX NAME)

RN 89-78-1 HCAPLUS

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 7647-14-5 HCAPLUS

CN Sodium chloride (NaCl) (9CI) (CA INDEX NAME)

Cl-Na

L54 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:63814 HCAPLUS

DN 134:120956

ED Entered STN: 26 Jan 2001

TI Pharmaceutical composition for topical application for skin injury treatment

IN Strumillo Djaczenko, Maria; Fava, Danila; Djaczenko, Wiktor

PA Italy

SO PCT Int. Appl., 13 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-00

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

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                                                               DATE
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PRAI IT 1999-RM465
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                               19990721 <--
    WO 2000-IT309
                         W
                               20000721 <--
CLASS
 PATENT NO.
               CLASS PATENT FAMILY CLASSIFICATION CODES
 WO 2001005387 ICM
                      A61K031-00
    Pharmaceutical compns. for topical use comprise a mixture, in a
    suitable polymer, of trichloroaceticacid, 2-
    hydroxybenzoic acid, menthol and, if desired,
    other pharmaceutically acceptable adjuvants and excipients and
    are used for the treatment of cutaneous injuries. A composition was prepared
    containing trichloroacetic acid in hexaethylene
    glycol, 2-hydroxybenzoic acid in
    hexaethylene glycol and menthol in
    ethanol.
st
    topical pharmaceutical skin injury
IT
    Medical goods
        (dressings; topical pharmaceuticals for skin injury
       treatment)
    Skin, disease
IT
        (injury; topical pharmaceuticals for skin injury treatment)
IT
    Polyoxyalkylenes, biological studies
    RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (topical pharmaceuticals for skin injury treatment)
IT
    Corticosteroids, biological studies
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (topical pharmaceuticals for skin injury treatment)
IT
    Drug delivery systems
        (topical; topical pharmaceuticals for skin injury treatment)
IT
    64-17-5, Ethanol, biological studies 112-60-7,
    Tetraethylene glycol 2615-15-8,
    Hexaethylene glycol 7647-14-5, Sodium
    chloride, biological studies 9002-89-5,
    Polyvinyl alcohol 25322-68-3, Peg
    RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (topical pharmaceuticals for skin injury treatment)
    50-02-2, Dexamethasone 69-72-7, 2-
    Hydroxybenzoic acid, biological studies 76-03-9
      Trichloroacetic acid, biological studies
    83-43-2, Methylprednisolone 89-78-1,
    Menthol 124-94-7, Triamcinolone
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378-44-9, Betamethasone
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (topical pharmaceuticals for skin injury treatment)
IT
     64-17-5, Ethanol, biological studies 112-60-7,
     Tetraethylene glycol 2615-15-8,
     Hexaethylene glycol 7647-14-5, Sodium
     chloride, biological studies 9002-89-5,
     Polyvinyl alcohol 25322-68-3, Peg
     RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (topical pharmaceuticals for skin injury treatment)
RN
     64-17-5 HCAPLUS
CN
     Ethanol (9CI) (CA INDEX NAME)
H_3C-CH_2-OH
RN
     112-60-7 HCAPLUS
CN
     Ethanol, 2,2'-[oxybis(2,1-ethanediyloxy)]bis- (9CI) (CA INDEX NAME)
HO-CH_2-CH_2-O-CH_2-CH_2-O-CH_2-CH_2-O-CH_2-OH
RN
     2615-15-8 HCAPLUS
CN
     3,6,9,12,15-Pentaoxaheptadecane-1,17-diol (9CI) (CA INDEX NAME)
                                                         PAGE 1-A
   PAGE 1-B
— cн<sub>2</sub>— cн<sub>2</sub>— он
RN
     7647-14-5 HCAPLUS
CN
     Sodium chloride (NaCl) (9CI) (CA INDEX NAME)
Cl-Na
RN
     9002-89-5 HCAPLUS
    Ethenol, homopolymer (9CI) (CA INDEX NAME)
CN
     CM
     CRN
         557-75-5
     CMF C2 H4 O
H_2C = CH - OH
RN
     25322-68-3 HCAPLUS
CN
     Poly(oxy-1,2-ethanediyl), \alpha-hydro-\omega-hydroxy- (9CI) (CA INDEX
     NAME)
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HO 
$$CH_2-CH_2-O$$

Absolute stereochemistry.

RN 69-72-7 HCAPLUS CN Benzoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)

RN 76-03-9 HCAPLUS CN Acetic acid, trichloro- (8CI, 9CI) (CA INDEX NAME)

RN 83-43-2 HCAPLUS CN Pregna-1,4-diene-3,20-dione, 11,17,21-trihydroxy-6-methyl-, (6α,11β)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 89-78-1 HCAPLUS

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 124-94-7 HCAPLUS

CN Pregna-1,4-diene-3,20-dione, 9-fluoro-11,16,17,21-tetrahydroxy-,  $(11\beta,16\alpha)$ - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 378-44-9 HCAPLUS

CN Pregna-1,4-diene-3,20-dione, 9-fluoro-11,17,21-trihydroxy-16-methyl-,  $(11\beta,16\beta)$ - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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L54
    ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
ΑN
    1998:799999 HCAPLUS
DN
    130:43364
ED
    Entered STN: 22 Dec 1998
TΤ
    Pyridine thiols reverse mucocutaneous aging
IN
    Thornfeldt, Carl R.
PA
    Cellergy Pharmaceuticals Inc., USA
SO
    PCT Int. Appl., 21 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
TC
    ICM A61K031-44
CC
    63-6 (Pharmaceuticals)
    Section cross-reference(s): 62
FAN.CNT 2
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                        Α
                               19980601
    US 1997-47360P
                        Ρ
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    US 1997-56290P
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                              19970903
                        P
    US 1997-58752P
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    WO 1998-US11270
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                               19980602
CLASS
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                       WO 9853822
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WO 9853822
                ECLA
                       A61K007/06C14B4; A61K007/48A2; A61K007/48C14D;
                       A61K008/19; A61K008/20; A61K008/23; A61K008/26;
                       A61K008/27; A61K008/29; A61K008/368; A61K008/49C6:
                       A61K031/00; A61Q005/10; A61Q019/00; A61Q019/02; A61Q
US 6071543
                ECLA
                       A61K007/06C14B4; A61K008/19; A61K008/20; A61K008/23;
                       A61K008/26; A61K008/27; A61K008/28; A61K008/29;
                       A61K008/68; A61K008/49C6; A61K031/00; A61Q005/10;
                       A61Q019/00; A61Q019/02; A61Q019/08; A61K007/48A2;
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lamm - 10 / 048235 A61K007/48C4D ECLA US 6482839 A61K007/06C14B4; A61K007/48A2; A61K007/48C14D; A61K008/19; A61K008/20; A61K008/23; A61K008/26; A61K008/27; A61K008/29; A61K008/368; A61K008/49C6; A61K031/00; A61Q005/10; A61Q019/00; A61Q019/02; A61Q AB This invention provides compns. and methods for preventing and reversing the signs and symptoms of intrinsic and photo aging. The compns. include one or more pyridine-thiols and tautomers with attached metallic moieties. Administration of the compds. to aging skin and mucous membranes in topical formulations, either as the only active ingredient or in combination with other known active ingredients, prevents and reverses aging symptoms. Addnl. compns. for preventing and reversing aging contain one or more sulfides and oxides of these same metallic ions, either alone or in combination with other mols. known or suspected to exhibit age reversing properties. Topical formulations containing both a pyridine-thiol and tautomers with attached metallic moiety and a metallic sulfide and/or metallic oxide effectively prevent and reverse the signs and symptoms of mucocutaneous aging. STantiaging skin ointment pyridine thiol formulation ITSolar radiation (aging induced by; pyridine thiols reverse mucocutaneous aging) IT Skin, disease (aging, wrinkles; pyridine thiols reverse mucocutaneous aging) IΤ Mucous membrane Skin, disease (aging; pyridine thiols reverse mucocutaneous aging) TT Cosmetics Cosmetics (creams, wrinkle-preventing; pyridine thiols reverse mucocutaneous IT Carboxylic acids, biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (dicarboxylic; pyridine thiols reverse mucocutaneous aging) ΤT Drug delivery systems (emulsions; pyridine thiols reverse mucocutaneous aging) TT Drug delivery systems (gels; pyridine thiols reverse mucocutaneous aging) TТ Carboxylic acids, biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (hydroxy; pyridine thiols reverse mucocutaneous aging) IT(irregular pigmentation; pyridine thiols reverse mucocutaneous aging) ITDrug delivery systems (lotions; pyridine thiols reverse mucocutaneous aging) IT ... Anti-inflammatory agents (nonsteroidal; pyridine thiols reverse mucocutaneous aging) ΙT Drug delivery systems (ointments, creams; pyridine thiols reverse mucocutaneous aging) IT Drug delivery systems (ointments; pyridine thiols reverse mucocutaneous aging) IT Carboxylic acids, biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

Drug delivery systems (pastes; pyridine thiols reverse mucocutaneous aging) IT Aging, animal Antioxidants

IT

(oxo; pyridine thiols reverse mucocutaneous aging)

Cations Seborrhea Skin, neoplasm (pyridine thiols reverse mucocutaneous aging) IT Thiols (organic), biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pyridine thiols reverse mucocutaneous aging) IT Aldehydes, biological studies Amides, biological studies Amino acids, biological studies Corticosteroids, biological studies Esters, biological studies Flavanols Glucocorticoids Lactones Phenols, biological studies Salts, biological studies Sulfones Tocopherols RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pyridine thiols reverse mucocutaneous aging) IT Drug delivery systems (solns.; pyridine thiols reverse mucocutaneous aging) IT Drug delivery systems (sprays; pyridine thiols reverse mucocutaneous aging) IT Drug delivery systems (suspensions; pyridine thiols reverse mucocutaneous aging) IT Drug delivery systems (topical; pyridine thiols reverse mucocutaneous aging) IT Acne (vulgaris; pyridine thiols reverse mucocutaneous aging) IT 110-86-1D, Pyridine, thiol derivs., biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pyridine thiols reverse mucocutaneous aging) 50-21-5, biological studies 50-81-7, Ascorbic acid, biological studies 53-86-1, Indomethacin 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 60-33-3, Linoleic acid, biological studies 64-18-6, Formic acid, 64-19-7, Acetic acid, biological studies 64-86-8, biological studies 65-85-0, Benzoic acid, biological studies 68-26-8, Retinol Colchicine 69-72-7, Salicylic acid, biological studies 74-79-3, Arginine, biological studies 76-03-9, Trichloroacetic acid, biological studies 76-93-7, Benzilic acid, biological studies 77-92-9, Citric acid, biological 79-09-4, Propanoic acid, biological studies 79-11-8D, Chloroacetic acid, derivs. 79-14-1, Glycolic acid, biological studies 79-43-6, Dichloroacetic acid, biological studies 80-08-0, Dapsone 80-69-3, Tartronic acid 87-69-4, biological studies 87-73-0, Saccharic 90-64-2, Mandelic acid 89-83-8, Thymol 108-46-3, 1,3-Benzenediol, biological studies 108-95-2, Phenol, biological studies 110-15-6, Butanedioic acid, biological studies 110-17-8, 2-Butenedioic acid (2E)-, biological studies 116-31-4, Retinaldehyde 123-99-9, Azelaic acid, biological studies 127-17-3, Pyruvic acid, biological 136-77-6, Hexyl resorcinol 144-62-7, Ethanedioic acid,

biological studies

300-85-6, 3-Hydroxybutyric acid 302-79-4, Tretinoin

463-40-1, Linolenic acid 470-82-6, Eucalyptol 473-81-4, Glyceric acid 501-30-4, Kojic acid 501-30-4D, Kojic acid, derivs. 526-99-8, Mucic 552-63-6, Tropic acid 685-73-4, Galacturonic acid 989-51-5, Epigallocatechin gallate 1198-69-2 1406-16-2D, Vitamin D, analogs 1490-04-6, Menthol 2782-86-7, Heptonic acid 6556-12-3, Glucuronic acid 6915-15-7, Malic acid 7429-90-5, Aluminum, biological studies 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-02-0, Nickel, biological studies 7440-09-7, Potassium, biological 7440-20-2, Scandium, biological studies 7440-22-4, Silver, biological studies 7440-23-5, Sodium, biological studies Strontium, biological studies 7440-31-5, Tin, biological studies 7440-32-6, Titanium, biological studies 7440-38-2, Arsenic, biological 7440-43-9, Cadmium, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies Copper, biological studies 7440-55-3, Gallium, biological studies 7440-56-4, Germanium, biological studies 7440-62-2, Vanadium, biological 7440-66-6, Zinc, biological studies 7440-67-7, Zirconium, biological studies 7440-70-2, Calcium, biological studies 7726-95-6, Bromine, biological studies 7782-49-2, Selenium, biological studies 13382-27-9, Galactonic acid 13463-41-7, Zinc pyrithione 13532-37-1, 4-Hydroxyvaleric acid 14915-37-8 15687-27-1, Ibuprofen 22071-15-4, Ketoprofen 29467-96-7, Pyridinethiol 34387-34-3 36322-90-4 56093-45-9, Selenium sulfide 62662-81-1, Methyl resorcinol 66664-10-6, Tetrahydroxypentanoic acid 74103-06-3, Ketorolac 216965-04-7 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pyridine thiols reverse mucocutaneous aging)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

(1) Sakamoto, T; JP 61238716 A2 1986 HCAPLUS

IT 69-72-7, Salicylic acid, biological studies
76-03-9, Trichloroacetic acid, biological
studies 1490-04-6, Menthol

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pyridine thiols reverse mucocutaneous aging)

RN 69-72-7 HCAPLUS

CN Benzoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)

RN 76-03-9 HCAPLUS

CN Acetic acid, trichloro- (8CI, 9CI) (CA INDEX NAME)

RN 1490-04-6 HCAPLUS

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)- (9CI) (CA INDEX NAME)

=> => fil reg FILE 'REGISTRY' ENTERED AT 08:04:22 ON 24 MAR 2005 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 MAR 2005 HIGHEST RN 847137-45-5 DICTIONARY FILE UPDATES: 23 MAR 2005 HIGHEST RN 847137-45-5

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

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CI

COM

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L61 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN
     15356-60-2 REGISTRY
ED
     Entered STN: 16 Nov 1984
CN
     Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1S,2R,5S)- (9CI)
     (CA INDEX NAME)
OTHER CA INDEX NAMES:
     Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1S-
     (1\alpha, 2\beta, 5\alpha)] -
CN
     Menthol, (1S, 3S, 4R) - (+) - (8CI)
OTHER NAMES:
CN
     (+)-Menthol
CN
     (1S, 2R, 5S) - (+) - Menthol
CN
     (1S, 2R, 5S) - Menthol
CN
     d-Menthol
FS
     STEREOSEARCH
MF
     C10 H20 O
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LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, NAPRALERT, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)
Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).

### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

472 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
477 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:240047

REFERENCE 2: 142:197451

REFERENCE 3: 142:176415

REFERENCE 4: 142:134334

REFERENCE 5: 142:106156

REFERENCE 6: 142:93227

REFERENCE 7: 142:74760

REFERENCE 8: 142:32874

REFERENCE 9: 142:6900

REFERENCE 10: 142:6594

L61 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN

RN 2216-51-5 REGISTRY

ED Entered STN: 16 Nov 1984

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1R- $(1\alpha, 2\beta, 5\alpha)$ ]-

CN Menthol, (1R, 3R, 4S) - (-) - (8CI)

OTHER NAMES:

CN (-)-Menthol

CN (-)-Menthyl alcohol

CN (-)-trans-p-Methan-cis-3-ol

CN (1R) - (-) -Menthol

CN (1R, 2S, 5R) - (-) -Menthol

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CN
     (R) - (-) - Menthol
     1R-Menthol
CN
     1-(-)-Menthol
CN
CN
     1-Menthol
CN
     Levomenthol
     NSC 62788
CN
     STEREOSEARCH
FS
DR
     98167-53-4
MF
     C10 H20 O
CI
     COM
LC
     STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
       BIOSIS, CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX,
       CHEMLIST, CIN, CSCHEM, DETHERM*, DIOGENES, DIPPR*, GMELIN*, HODOC*,
       HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MSDS-OHS, NAPRALERT, PROMT, PS,
       RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
                      DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
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Absolute stereochemistry. Rotation (-).

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3042 REFERENCES IN FILE CA (1907 TO DATE)
43 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3056 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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REFERENCE
           1: 142:246150
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           2: 142:240072
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           3: 142:240047
REFERENCE
           4: 142:231851
REFERENCE
           5: 142:225699
REFERENCE
           6: 142:225255
REFERENCE
           7: 142:218968
REFERENCE
           8: 142:218727
REFERENCE
           9: 142:217709
REFERENCE 10: 142:217661
L61 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN
    1490-04-6 REGISTRY
    Entered STN: 16 Nov 1984
    Cyclohexanol, 5-methyl-2-(1-methylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
    Menthol (8CI)
CN
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OTHER NAMES:
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1-Methyl-4-isopropyl-3-cyclohexanol CN 2-Isopropyl-5-methylcyclohexan-1-ol CN CN 2-Isopropyl-5-methylcyclohexanol CN 3-Hydroxy-p-menthane 5-Methyl-2-(1-methylethyl)cyclohexanol CN CN5-Methyl-2-isopropylcyclohexanol Menthyl alcohol CNCN p-Menthan-3-ol FS 3D CONCORD MF C10 H20 O CI COM LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, PDLCOM\*, PHAR, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL, VETU, VTB (\*File contains numerically searchable property data) DSL\*\*, EINECS\*\*, TSCA\*\* Other Sources: (\*\*Enter CHEMLIST File for up-to-date regulatory information)

### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3143 REFERENCES IN FILE CA (1907 TO DATE)
65 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3151 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 142:246216

REFERENCE 2: 142:246150

REFERENCE 3: 142:246008

REFERENCE 4: 142:245836

REFERENCE 5: 142:245667

REFERENCE 6: 142:245649

REFERENCE 7: 142:242320

REFERENCE 8: .142:240275

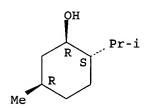
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REFERENCE 10: 142:225229

L61 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN RN 89-78-1 REGISTRY

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Entered STN: 16 Nov 1984
ED
CN
     Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel- (9CI)
     (CA INDEX NAME)
OTHER CA INDEX NAMES:
     Cyclohexanol, 5-methyl-2-(1-methylethyl)-,
CN
     (1\alpha, 2\beta, 5\alpha) -
CN
     Menthol, cis-1,3,trans-1,4- (8CI)
     Menthol, dl- (6CI)
CN
OTHER NAMES:
     (±)-Menthol
CN
CN
     (1R, 2S, 5R) -rel-5-Methyl-2-(1-methylethyl)cyclohexanol
CN
     dl-Menthol
CN
     Fisherman's Friend Lozenges
CN
     Hexahydrothymol
CN
     Menthacamphor
CN
     Menthol
CN
     Menthomenthol
CN
     NSC 2603
CN
     Peppermint camphor
CN
     rac-Menthol
CN
     Racementhol
CN
     Therapeutic Mineral Ice
CN
     Thymomenthol
FS
     STEREOSEARCH
DR
     15356-70-4
MF
     C10 H20 O
CI
     COM
LC
     STN Files:
                  ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DIOGENES, EMBASE, GMELIN*,
       HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS,
       NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, USAN,
       USPAT2, USPATFULL
         (*File contains numerically searchable property data)
                      DSL**, EINECS**, TSCA**
     Other Sources:
         (**Enter CHEMLIST File for up-to-date regulatory information)
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Relative stereochemistry.



### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2855 REFERENCES IN FILE CA (1907 TO DATE)
39 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2867 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 142:246184

REFERENCE 2: 142:245562

REFERENCE 3: 142:244914

REFERENCE 4: 142:239076

REFERENCE 5: 142:225750

REFERENCE 6: 142:217778

REFERENCE 7: 142:217608

REFERENCE 8: 142:213700

REFERENCE 9: 142:204735

REFERENCE 10: 142:204422

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L60 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN

RN 477243-44-0 REGISTRY

ED Entered STN: 19 Dec 2002

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H20 O

SR CA

LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER

#### Relative stereochemistry.

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:139879

REFERENCE 2: 139:230691

REFERENCE 3: 137:310436

L60 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN

RN 189076-46-8 REGISTRY

ED Entered STN: 16 May 1997

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2R)-rel-[partial](9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H20 O

SR CA

LC STN Files: CA, CAPLUS, CHEMCATS

Relative stereochemistry.

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:293451

L60 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN

RN 64282-88-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1S,2S,5S)- (9CI)

(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1S-

 $(1\alpha, 2\alpha, 5\alpha)$ ] -

OTHER NAMES:

CN (-)-Neoisomenthol

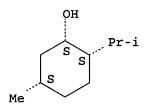
FS STEREOSEARCH

MF C10 H20 O

CI CON

LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, IFICDB, IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPATFULL (\*File contains numerically searchable property data)

Absolute stereochemistry. Rotation (+).



### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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19 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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REFERENCE 2: 139:316174

REFERENCE 3: 138:39504

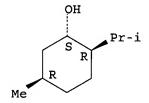
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REFERENCE
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    ANSWER 4 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
L60
RN
     23283-97-8 REGISTRY
ED
     Entered STN: 16 Nov 1984
     Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1S,2R,5R)- (9CI)
CN
     (CA INDEX NAME)
OTHER CA INDEX NAMES:
     Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1S-
     (1\alpha, 2\beta, 5\beta)] -
     Menthol, (1R, 3S, 4R) - (+) - (8CI)
CN
OTHER NAMES:
CN
     (+)-Isomenthol
CN
     d-Isomenthol
FS
     STEREOSEARCH
MF
     C10 H20 O
CI
     COM
LC
     STN Files:
                 AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS,
       CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, HODOC*, IFICDB,
       IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:
                      DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
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Absolute stereochemistry. Rotation (+).



# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

108 REFERENCES IN FILE CA (1907 TO DATE)
108 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:218727 REFERENCE 2: 142:134146 REFERENCE 3: 141:260066 REFERENCE 4: 140:406589 REFERENCE 5: 140:217814 REFERENCE 6: 140:176684 REFERENCE 7: 140:12957 REFERENCE 8: 139:381216

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REFERENCE 9: 139:350307
REFERENCE 10: 139:344933
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L60 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN

RN 20752-34-5 REGISTRY

ED Entered STN: 16 Nov 1984

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2R,5R)- (9CI)

(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1R-

 $(1\alpha, 2\alpha, 5\alpha)$ ]-

CN Menthol, (1R, 3R, 4R) - (+) - (8CI)

OTHER NAMES:

CN (+)-Neoisomenthol

CN (R,R,R)-Menthol

FS STEREOSEARCH

MF C10 H20 O

CI COM

LC STN Files: BEILSTEIN\*, BIOBUSINESS, CA, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, HODOC\*, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT7ULL (\*File contains numerically searchable property data)
Other Sources: DSL\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (-).

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OTHER NAMES:
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CI
     COM
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       IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
         (*File contains numerically searchable property data)
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Absolute stereochemistry. Rotation (-).

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L60 ANSWER 7 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
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Absolute stereochemistry. Rotation (-).
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L60
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ED
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     Menthol, trans-1,3,cis-1,4-(\pm)- (8CI)
OTHER NAMES:
CN
     (±)-Isomenthol
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Cyclohexanol, 5-methyl-2-(1-methylethyl)-,  $(1\alpha, 2\beta, 5\beta)$ -

CN

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Relative stereochemistry.

 $(\mathbf{1}\alpha,\mathbf{2}\alpha,\mathbf{5}\beta)-(\mathbf{\pm})-$ 

CN

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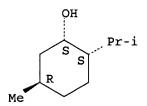
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Menthol, trans-1,3, trans-1,4-( $\pm$ )- (8CI)

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Relative stereochemistry.



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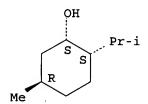
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Absolute stereochemistry. Rotation (+).



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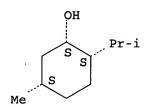
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     Menthol, cis-1,3,cis-1,4- (8CI)
OTHER NAMES:
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Relative stereochemistry.



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>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
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DNC C2001-043574
TI
     Pharmaceutical composition useful for treating cutaneous injuries, e.g.
     resulting from burns, and dermatitis from animal sting, contains
     trichloroacetic acid, 2-hydroxybenzoic
     acid and 5-methyl-2-(1-
    methylethyl)cyclohexanol in polymer.
DC
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ICS A61K031-19; A61K031-57; A61P017-12

ICI A61K031-57, A61K031:045, A61K031:19

AB WO 200105387 A UPAB: 20010317

NOVELTY - A novel pharmaceutical composition for topical use comprises a mixture, in a suitable polymer, of trichloroacetic acid

, 2-hydroxybenzoic acid, (1 alpha , 2 beta ,

5 alpha )-5-methyl-2-(1-

methylethyl)cyclohexanol (I), and, if desired, other adjuvants and excipients.

ACTIVITY - Dermatological; tranquilizer; vulnerary; antiinflammatory. The composition was applied topically in liquid form on 10 subjects affected by first and second superficial degree burns, occurred in the previous 24 hours, which extended over a mean cutaneous surface of 25 cm2 (varying from 4 to 200 cm2). The application of the composition caused in all the subjects a quick re-absorption of the liquid contained in the phlyctenas (within 1 hour after the first application), with reduction of the associated erythema and painful symptomatology. In all the subjects affected by first degree burns the restitutio ad integrum occurred 2 days after the injury event by a single application of the composition. In the subjects where phlyctenas were generated an immediate amelioration of the injury after the first application and restitutio ad integrum within 4/5 days occurred, during which period the composition was again applied to accelerate the exfoliation of the injured cutis. During the treatment local or systemic side-effects were not observed and the patients reported the application of the composition to be absolutely painless.

MECHANISM OF ACTION - None given.

USE - The compositions can be used for the treatment of cutaneous injuries, e.g. resulting from mechanical traumas or surgical operations, burns, dermatitis both from animal sting and animal or poisonous plant contact (claimed). They can also by used in the therapy and prevention of hypertrophic cicatrices and keloids (claimed). They can also be used in aesthetic medicine, e.g. as exfoliating agents (claimed).

ADVANTAGE - The compositions are able to reduce dramatically and, in many cases, to result in a complete disappearance of the hypertrophic cicatrices and keloids. The topical application is completely painless and does not result in any discomfort for the patient being treated.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A05-H03A; A10-E09B2; A12-V01; B01-B02; B04-C03B; B04-C03C; B05-A01B; B05-C07; B10-C03; B10-C04E; B10-E04A; B10-E04D; B14-C03; B14-J01B4; B14-N17A; B14-N17B; B14-N17C; B14-R01

TECH UPTX: 20010317

TECHNOLOGY FOCUS - POLYMERS - Preferred Material: The polymer may be polyethylene glycols, e.g. tetraethylene glycol or hexaethylene glycol, polyvinyl alcohol, or polyoxyethylene alcohol.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The concentration of **trichloroacetic acid** is preferably 20-45 % w/v. The concentration of **2-hydroxybenzoic** acid is preferably 10-30 % w/v. The adjuvants and excipients are preferably ethanol or sodium chloride. Preparation: The composition may be

prepared by:

(1) preparing, in an anhydrous atmosphere, the distinct (A) and (B) mixtures, respectively, of (A) trichloroacetic acid

(40-90 %) in a suitable polymer, and (B) 2-

hydroxybenzoic acid (20-60 %) in a suitable polymer;

- (2) mixing, by adding small subsequent portions, the same volumes of the 2 mixtures to obtain the (A)+(B) mixture;
- (3) adding a volume of a (I) saturated solution in anhydrous ethanol equal to 2% of the volume of the (A)+(B) mixture;
- (4) adding of NaCl to obtain a final concentration of about 1.2% w/v;
- (5) keeping the obtained composition in a bottle filled with anhydrous air at 30 degrees C in reduced pressure conditions and leaving at ambient temperature for about 24 hours.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The compositions may also contain a corticosteroid, e.g. triamcinolone, betamethasone, methylprednisolone or dexamethasone.

ABEX

UPTX: 20010317

ADMINISTRATION - The compositions can be used in the form of an ointment, gel, foam, liquid preparations, or medicated plaster. No dose given.

EXAMPLE - A mixture (A) containing trichloroacetic acid in hexaethylene glycol (apparent molecular weight (MW) 290) (50 % w/v) in anhydrous atmosphere (in a chemical hood in the presence of phosphorous pentoxide) was prepared, by adding the acid to the polymer portionwise and under continuous stirring to enhance the mixing. A mixture (B) containing 2-hydroxybenzoic acid (as granules having diameter at most 50 microm) in hexaethylene glycol (apparent MW 290) (40 % w/v) was prepared. The acid was added to the polymer portionwise and under continuous stirring to enhance the mixing. After the preparation of the mixtures same volumes were mixed to obtain a (A)+(B) mixture (50 % v/v). The mixture was prepared using a 1000 ml tightly closed glass container on whose bottom (A) (10 ml) were poured. Then (B) (1 ml) and component (A), respectively, were stratified in the order. The amounts of (A) and (B) were again poured alternatively layer by layer to a 990 ml volume upon which the filling of the container was completed by pouring 10 ml of (B). A volume of a (lalpha, 2beta, 5alpha)-5-methyl-

2-(1-methylethyl)cyclohexanol

saturated solution in anhydrous ethanol equal to 2 % of volume of the (A)+(B) mixture was added; subsequently sodium chloride was added to obtain a final concentration of about 1.2 % w/v. Anhydrous air (through a solution of concentrated sulfuric acid) was blown within the thus obtained composition at 30 degrees C and reduced pressure, till air bubbles gurgled uniformly through the container, followed by its closing.

DEFINITIONS - An INDEPENDENT CLAIM is also included for the preparation of the composition.

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CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 22 Mar 2005 (20050322/PD)
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HIGHEST GRANTED PATENT NUMBER: US6871356
HIGHEST APPLICATION PUBLICATION NUMBER: US2005060780
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ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 22 Mar 2005 (20050322/PD)
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      No Drawings
LN.CNT 1478
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       According to the present invention, there is provided cosmetics or
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external preparations for skin which comprises, as the effective ingredient, a chemical peeling agent, a bactericide, an anionic surfactant or a cationic surfactant component in combination with a compound capable of mitigating the irritation, inflammation, etc. of the skin caused by these components.

The present invention is skin cosmetics, external preparations for skin or hair cosmetics which are characterized by containing the following components (A) and (B) or it is skin cosmetics or external preparations for skin which are characterized by containing the following components (C) and (D)

Components (A) and (C): one or more members selected from a cystine derivative and salt thereof.

Component (B): one or more of members selected from a chemical peeling agent, a bactericide and an anionic surfactant

Component (C): a cationic surfactant

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2004:202914 USPATFULL
AN
       . . citric acid, isocitric acid, 2, 3, 4, 5-tetrahydroxyhexane-1,6-
SUMM
       dioic acid (glucaric acid, mannaric acid, saccharic acid, mucic acid,
       etc.) quinic acid, salicylic acid, tropic acid,
       trethochanic acid, citramalic acid, agaricic acid, aleuritic acid,
       pantoic acid, lactobionic acid, hexuronic acid, etc. As other chemical.
            phenylpyruvic acid, methyl phenylpyruvate, ethyl phenylpyruvate,
       2-ketobutyc acid, 2-ketopentanoic acid, 2-ketohexanoic acid,
       2-ketoheptanoic acid, 2-ketooctanoic acid, 2-ketododecanoic acid, methyl
       2-ketooctanate; trichloroacetic acid, resorcinol,
      phenol and the like. Furthermore, there can be taken natural products or
       natural extracts containing the hydroxy acid or. .
SUMM
            . phenol, chlorophenol, chloro-m-cresol, p-chloro-m-xylenol,
       isopropyl methyl phenol, resorcine, resorcine acetate, o-phenylphenol,
       phenoxyethanol, thymol, cresol, hinokitiol, thioxolone, benzoic acid,
       sodium benzoate, salicylic acid, sodium salicylate,
       dehydroacetic acid and salts thereof, sorbic acid and salts thereof,
       hexachlorophene, trichlorohydroxydiphenyl ether (triclosan),
       trichlorocarbanilde, halocarboxylic acid, monoethanolamide.
SUMM
            . N-long chain acylalanine, N-long chain acylsarcosine, N-long
       chain acyl-β-alanine, N-long chain acyl-N-methyl-β-alanine and
       the like; ether carboxylates such as sodium polyoxyethylene
       (3E. O.) lauryl ether acetate, polyoxyethylene (3E. O.) lauryl
       ether acetic acid, sodium polyoxyethylene (3E.O.) tridecyl
       ether acetate, polyoxyethylene (3E. O.) tridecyl ether acetic
       acid, sodium polyoxyethylene (4.5E. O.) lauryl ether acetate,
       sodium polyoxyethylene (6E. O.) tridecyl ether acetate,
       polyoxyethylene (7E. O.) tridecyl ether acetic acid, sodium
       polyoxyethylene (3E. O.) stearyl ether acetate, sodium
       polyoxyethylene (3E. O.) octyl ether acetate, monoethanolamine
       polyoxyethylene (3E. O.) lauryl ether acetate and the like;
       alkyl sulfonates such as triethanolamine dodecylbenzenesulfonte, sodium
       dodecylbenzenesulfonate, sodium \alpha-olefinsulfonate (carbon number.
             such as sulfosuccinic acid dioctyl ester sodium salt,
       sulfosuccinic acid lauryl ester disodium salt, sulfosuccinic acid tallow
       amide disodium salt, polyoxyethylene (1-SE. O.) sulfosuccinic
       acid lauryl ester disodium salt, polyoxyethylene (3E. O.)
       sulfosuccinic acid myrisyl ester disodium salt, sulfosuccinic acid
      polyoxyethylene (5E. O.) lauroyl ethanolamide disodium salt,
       sulfosuccinic acid polyoxyethylene (2E. O.) monooleylamide
       disodium salt and the like; N-acylsulfonates such as sodium salt of
       cocoyl-N-methyltaurine, sodium salt of lauroyl-N-methyltaurne,
       triethanolamine.
                        . . sodium palmityl sulfate, triethanolamine lauryl
       sulfate, triethanolamine myristyl sulfate triethanolamine palmityl
       sulfate and the like; ether sulfates such as triethanolamine
      polyoxyethylene (2-4E. O.) lauryl ether sulfate, sodium
      polyoxyethylene (2-4E. O.) myristyl ether sulfate, sodium
      polyoxyethylene (2-4E. O.) palmityl ether sulfate,
       triethanolamine polyoxyethylene (2-4E. O.) palmityl ether
       sulfate and the like; alkyl phosphates such as sodium lauryl phosphate,
      triethanolamine lauryl phosphate, sodium myristyl phosphate,
       triethanolamine myristyl phosphate, sodium oleyl phosphate,
       triethanolamine oleyl phosphate, sodium polyoxyethylene (2-4E.
       0.) lauryl ether phosphate, triethanolamine polyoxyethylene
       (2-4E. O.) lauryl ether phosphate, sodium polyoxyethylene
       (2-4E. O.) myristyl ether phosphate, triethanolamine
      polyoxyethylene (2-4E. O.) myristyl ether phosphate, sodium
      polyoxyethylene (2-4E. O.) oleyl ether phosphate,
       triethanolamine polyoxyethylene (2-4E. O.) oleyl ether
      phosphate, and the like.
SUMM
       [0026] As examples of the anti-inflammatory drug, there may be taken
      phenylbutazone, indomethacine, ibuprofen, ketoprofen, allantoin,
      guaiazulene, resorcin, hydrocortisone, prednisolone,
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SUMM

SUMM

SUMM

SUMM

SUMM

SUMM

DETD

DETD

10%). At that time, the pH.

methylprednisolone, dexamethasone, triamcinolone, triamcinolone acetonide, fludroxycortide, clobetasone, clobetasol and steroid esters thereof; ketal, acetal and hemiacetal derivative; flufenainic acid, bufexamac, naproxen, flurbiprofen, fenbufen, tenoxicam, piroxicam, mefenamic acid; salicylic acid, its derivative and salts thereof such as sodium salicylate, methyl salicylate, glycol salicylate and the like; D-panthenol, its derivative and. absorbers such as p-aminobenzoic acid, sodium p-aminobenzoate, ethyl p-aminobenzoate, butyl p-aminobenzoate, 2-ethylhexyl p-aminobenzoate, amyl p-dimethylaminobenzoate, glyceryl p-iobenzoate and the like; salicylic acid ultraviolet absorbers such as 2-ethylhexyl salicylate, triethanolamine salicylate, homomenthyl salicylate, dipropylen glycol salicylate, methyl salicylate, ethylene glycol salicylate, phenyl salicylate,. . γ-linolenic acid, eicosapentaenoic acid, its derivative and salts thereof; organic acids selected from glycolic acid, succinic acid, lactic acid and salicylic acid, their derivatives and salts thereof; estradiol, its derivative and salts thereof; silk protein, its hydrolized product and derivatives thereof; hemoglobin. [0031] As examples of the metal chelating agent, there may be taken malic acid, citric acid, salicylic acid, tartaric acid, gluconic acid, phytic acid, their derivatives and salts thereof; ethylenediamine-tetraacetic acid, its derivative and salts thereof; diethlenetriamine-pentaacetic acid,. [0034] As examples of the solvent, there may be taken lower alcohols such as ethanol and the like, ethers, glycerins, liquid nonionic surfactants, liquid oily raw materials, other organic solvents, water, etc. [0039] As examples of the percutaneous absorption promotors, there may be taken 2-pyrrolidone, 1-hexanol, 1-octanol, 1-decanol, 1menthol, sodium lauryl sulfate, isopropyl myristate, n-hexyl acetate, oleic acid, etc. [0040] As the steroid hormone, there may be taken 21acetoxypregnenolone, alclometasone, algestone, almcinonide, beclomethasone, betamethasone, budesonide, chloroprednisone, clobetasone, clocortolone, cloprednol, corticosterone, cortisone, cortisol, deflazacort, desonide, diflorasone, diflucortolonc, difluprednate, enoxolone, fluazacort, flucloronide, flumethasone, flunisolide, fluocinolone acetonide, fluocinonide, fluocortin butyl, fluocortolone, fluorometholone, fluperolone. acetate, fluprednisolone, flurandrenolide, formocortal, halcinonide, halometasone, halopredone acetate, hydrocortamate, hydrocortisone, hydrocortisone phosphate, hydrocortisone-21-succinate sodium salt, hydrocortisone tebutate, mazipredone, medrysone, meprednisone, methylprednisolone, mometasone furoate, paramethasone, prednicarbate, prednisolone-21-diethylaminoacetate, prednisolone sodium phosphate, prednisolone sodium succinate, prednisolone sodium-21-m-sulfobenzoate, prednisolone-21-stearoylglycolate, prednisolone tebutate, prednisolone-21-trimethylacetate, predonisone, prednival, prednylidene, prednylidene-21-diethylaminoacetate, tixocortol, triamcinolone, triamcinolone acetonide, triamcinolone benetonide, triamcinolone hexaacetonide, fluticasone, etc. skin induced by an organic acid. There were prepared Solution A of only glycolic acid dissolved in a 25% aqueous ethanol solution (the concentration of glycolic acid: 10%) and Solution B of glycolic acid and N, N'-diacetyl-L-cystine dimethyl ester dissolved in a 25% aqueous ethanol solution (the concentration of glycolic acid: 10%, the concentration of N, N'-diacetyl-L-cystine dimethyl ester:

[0051] There were prepared Solution C of only glycolic acid dissolved in

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a 25% aqueous ethanol solution (the concentration of glycolic
       acid: 20%) and Solution D of glycolic acid and N, N'-dioctanoyl-L-
       cystine dimethyl ester dissolved in a 25% aqueous ethanol
       solution (the concentration of glycolic acid: 20%, the concentration of
       N, N'-dioctanoyl-L-cystine dimethyl ester: 5%), and the function of N,.
            . of the skin induced an organic acid. There were prepared a
DETD
       solution of glycolic acid dissolved in a 25% aqueous ethanol
       solution (the concentration of glycolic acid: 10%) and a test solution
       of N, N'-diacetyl-L-cystine dimethyl ester dissolved in the same. .
DETD
                and irritation induced by an organic acid. A test solution of
       N, N'-diacetyl-L-cystine dimethyl ester dissolved in a 25% aqueous
       ethanol solution (the concentration of N, N'-diacetyl-L-cystine
       dimethyl ester; 10%) was prepared. A solution of only the solvents was
       separately prepared. . .
DETD
       [0066]
    N, N'-di(n-lauroyl)-L-cystine dimethyl ester
                                                    2.0%
    White Vaseline
                                                    25.0%
    Stearyl alcohol
                                                    20.0%
    Propylene glycol
                                                    12.0%
      Polyoxyethylene hardened castor oil
                                                      4.0%
    Glycerin monostearate
                                                    1.0%
    Glycolic acid
                                                    1.0%
      Trichloroacetic acid
                                                      1.0%
    Antiseptic
                                                    q.s.
    Perfume
                                                    q.s.
    Purified water
                                                    Balance
       [0067]
DETD
       N, N'-di(n-valeryl)-L-cystine dimethyl ester 3.0%
       Glycolic acid
       Glycerin
                                                  3.0%
       Sorbitol
                                                  2.0%
         Polyoxyethylene (20) oleyl ether
                                                    1.0%
                                                    15.0%
       Zinc p-phenol sulphonate
                                                  0.2%
       Buffer
                                                  0.1%
       Perfume
                                                  0.2%
       Antiseptic
                                                  q.s.
       Purified water
                                                  Balance
DETD
       [8900]
    N, N'-di(n-propionyl)-L-cystine dimethyl ester
                                                      0.5%
    Citric acid
                                                      1.0%
    Urea
                                                      4.0%
      Salicylic acid
                                                        2.0%
    Lactic acid
                                                      2.0%
    Glycerin
                                                      2.0%
   Betaine
                                                      2.0%
   Hyaluroinic acid
                                                      0.1%
      Ethanol
                                                        15.0%
   Buffer
                                                      0.1%
    Perfume
                                                      0.2%
    Antiseptic
                                                      q.s.
    Purified water
                                                      Balance
DETD
```

```
Lactic acid
                                                    0.1%
    Fruit acid
                                                    0.1%
    Glycerin
                                                    4.0%
    Kaolin
                                                    1.0%
    Caramine
                                                    0.7%
    Camphor
                                                    0.2%
      Ethanol
                                                       14.0%
    Perfume
                                                    q.s.
    Purified water
                                                    Balance
DETD
       [0070]
    N, N'-di (n-butyryl) -L-cystine dimethyl ester 1.0%
    Resorcinol
    Kojic acid
                                                  1.0%
    Stearic acid
                                                  2.0%
      Polyoxyethylene (25) cetyl ether
                                                    3.0%
    Glyceryl monostearate
                                                  2.0%
    Octyl dodecanol
                                                  10.0%
    Cetanol
                                                  6.0%
    Reduced lanolin
                                                  4.0%
                                                  9.0%
    Squalane
    1,3-Butylene glycol
                                                  6.0%
      Polyethylene glycol (1500)
                                                    4.0%
    Antiseptic
                                                  q.s.
    Perfume
                                                  q.s.
    Purified water
                                                  Balance
DETD
       . . . Solid paraffin
                                                                5.0%
       Bees wax
                                                       10.0%
       Vasseline
                                                       15.0%
       Liquid paraffin
                                                       41.0%
       1,3-Butylene glycol
                                                       4.0%
       Glyceryl monostearate
                                                       2.0%
         Polyoxyethylene (20) sorbitan monolaurate
                                                         2.0%
       Borax
                                                       0.2%
       Antiseptic
                                                       q.s.
       Perfume
                                                       q.s.
       Antioxidant
                                                       q.s.
       Purified water
                                                       Balance
DETD
       . . . ,19.0%
    Stearic acid
                                                  5.0%
    Glyceryl monostearate
                                                  5.0%
    Sorbitan monostearate
                                                  12.0%
    Polyethylene sorbitan monostearate
                                                  38.0%
    Glycolic acid
                                                  1.0%
      Trichloroacetic acid
                                                    1.0%
    Chelating agent
                                                  q.s.
    Antiseptic
                                                  q.s.
    Perfume
                                                  q.s.
    Purified water
                                                  Balance
DETD
       N,N'-diacetyl-L-cystine
       N.sup.α-cocoylarginine ethyl ester DL-pyrrolidone 0.1%
       carboxylate
       Retinol
                                                       0.1%
                                                       0.5%
       Bees wax
                                                       2.0%
       Vasseline
       Glyceryl monostearate
                                                       1.0%
         Polyethylene glycol monooleate
                                                         1.0%
                                                       2.0%
       Methyl polysiloxane
       Cetanol
                                                       1.0%
```

```
Squalane
                                                       6.0%
       Carboxyvinyl polymer
                                                       0.5%
      1,3-Butylene glycol
                                                       4.0%
         Ethanol
                                                         5.0%
       Antiseptic
                                                       q.s.
       Perfume
                                                       q.s.
       Antioxidant
                                                       q.s.
       Purified water
                                                       Balance
DETD
          . . dimethyl ester 1.0%
       Lactic acid
                                                       2.0%
       Stearyl alcohol
                                                       0.5%
       Hardened palm oil
                                                       3.0%
       Liquid paraffin
                                                       35.0%
       Dipropylene glycol
                                                       6.0%
         Polyethylene glycol (400)
                                                         4.0%
       Sorbitan sesquioleate
                                                       1.6%
         Polyoxyethylene (20) oleyl ether
                                                        2.4%
       Carboxyvinyl polymer
                                                       1.5%
       Potassium hydroxide
                                                       0.1%
       Chelating agent
                                                       q.s.
       Antiseptic
                                                       q.s.
       Perfume
                                                       q.s.
       Purified water
                                                       Balance
DETD
       [0075]
       N, N'-diacetyl-L-cystine diethyl ester 0.5%
       Liquid paraffin
                                             12.0%
       Glyceryl tri(2-ethylhexanate)
                                             50.0%
       Sorbit
                                             10.0%
         Polyethylene glycol (400)
                                                5.0%
                                              1.0%
       Lactic acid
       Acylmethyl taurine
                                               4.0%
         Polyoxyethylene (20) isocetyl ether 10.0%
       Perfume
                                             q.s.
       Antiseptic
                                             q.s.
       Purified water
                                             Balance
DETD
       [0076]
       N, N'-di(n-heptanoyl)-L-cystine dimethyl ester 0.5%
       Fruit acid
       Dipropylene glycol
                                                       5.0%
         Polyethylene glycol (400)
                                                         5.0%
         Ethanol
                                                         10.0%
       Carboxyvinyl polymer
                                                       0.5%
       Sodium alginate
                                                       0.5%
       Potassium hydroxide
                                                       0.2%
         Polyoxyethylene (20) sorbitan monostearate
                                                         1.0%
                                                       0.5%
       Sorbitan monooleate
       Oleyl alcohol
                                                       0.5%
       Placenta extract
                                                       0.2%
       dl-tocopherol acetate
                                                       0.2%
       Perfume
                                                       q.s.
       Antiseptic
                                                       q.s.
DETD
       [0077]
       N, N'-diacetyl-L-cystine diisopropyl ester 3.0%
       Isopropanol
                                                   2.0%
                                                     15.0%
         Polyvinyl alcohol
       Carboxymethylcellulose
                                                   5.0%
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1,3-Butylene glycol
                                                   5.0%
                                                     12.0%
         Ethanol
       Sodium alginate
                                                   0.5%
         Polyoxyethylene (20) oleyl ether
                                                     0.5%
       Perfume
                                                   q.s.
       Antiseptic
                                                   q.s.
       Buffer
                                                   q.s.
       Purified water
                                                   Balance
DETD
       [0078]
    N, N'-di(n-octanoyl)-L-cystine dimethyl ester 5.0%
      Salicylic acid
                                                     0.5%
    Liquid paraffin
                                                   10.0%
      Polyoxyethylene (20) sorbitan monooleate
                                                     3.5%
    Propylene glycol
                                                   3.0%
    Titanium oxide
                                                   9.0%
    Kaolin
                                                   24.0%
    Talc
                                                   42.0%
    Coloring pigment
                                                   3.0%
    Perfume.
DETD
       [0080]
    N, N'-di (n-butyryl)-L-cystinc diamide
                                                   0.5%
    Triethylamine N-lauroylglutamate
                                                   25.0%
    Triethanolamine laurate
                                                   5.0%
      Polyoxyethylene (4) polyoxypropylene (11)
                                                     5.0%
    butyl ether
      Ethanol
                                                     3.0%
    Perfume
                                                   q.s.
    Antiseptic
                                                   q.s.
    Purified water
                                                   Balance
DETD
       [0081]
    N, N'-dioctanoyl-L-cystine dimethyl ester
    Triethanolamine polyoxyethylene (3) lauryl ether 3.0%
    sulfate
    Sodium polyoxyethlene (3) lauryl ether sulfate
    Sodium lauryl salfate
                                                       1.5%
    Lauric acid diethanolamide
                                                       3.0%
DETD
       [0082]
         N, N'-diacetyl-L-cystine dimethyl ester 1.0%
         Lactic acid
                                                   0.02%
                                                   0.2%
         Oleyl alcohol
         Liquid paraffin
                                                   0.5%
           Ethanol
                                                     5.0%
         Sorbitol
                                                   4.0%
           Polyoxyethylene (20) lauryl ether
                                                     2.5%
         Sorbitan monolaurate
                                                   0.5%
         Pigment
                                                   0.1%
         Antiseptic
                                                   0.1%
                                                   0.1%
         Perfume
         Purified water
                                                   Balance
DETD
       [0083]
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Benzalkonium chloride
                                                             1.0%
    Chlorhexidine gluconate
                                                             0.5%
    2-Lauryl-N-carboxymethyl-N-hydroxyethylimidazolium
                                                             2.0%
    betaine
                                                             5.0%
    Sodium DL-pyrrolidone carboxylate
    N.\sup \alpha-cocoylarginine ethyl ester DL-pyrrolidone 1.0%
DETD
       [0084]
       N, N'-dioctanoyl-L-cystine dimethyl ester
                                                  0.1%
       Lauryl dimethylaminoacetic acid betaine
                                                  5.0%
         Sodium chloride
                                                    1.0%
       Benzalkonium chloride
                                                  0.1%
       Stearyl trimethyl ammonium chloride
                                                  2.0%
       Boric acid
                                                  0.5%
                                                  0.1%
       Borax
       EDTA
                                                  0.1%
       Purified water
                                                  Balance
IT
      50-21-5, Lactic acid, biological studies
                                                  67-63-0, Isopropanol,
      biological studies 69-72-7, Salicylic acid, biological studies
      77-92-9, Citric acid, biological studies
                                                  79-14-1, Glycolic acid,
      biological studies
                           112-03-8, Stearyltrimethylammonium chloride
      151-21-3, Sodium laurylsulfate, biological studies
                                                            683-10-3,
      Lauryldimethylamino acetate betaine
                                           2224-49-9, Triethanolamine laurate
      5545-17-5, N,N'-Diacetyl-L-cystine
                                            9004-82-4, Polyoxyethylene lauryl
      ether sulfate sodium salt
                                  18472-51-0, Chlorhexidine gluconate
      25859-09-0, Diethanolamine laurate
                                            27028-82-6, Polyoxyethylene lauryl
      ether sulfate triethanolamine salt
                                            32381-28-5
                                                         41489-26-3D.
      N\alpha-cocovl derivs.
                          53576-49-1
                                        54571-67-4
                                                     121972-22-3
      139416-22-1
                    139416-28-7
                                  139416-29-8
                                               193697-38-0
                                                               263553-64-6
      263553-65-7
                    263553-66-8
                                  460040-30-6
        (skin compns. containing cystine derivs., and chemical pealing agents,
        bactericides, and/or surfactants)
L130 ANSWER 2 OF 8 USPATFULL on STN
AN
       2003:180375 USPATFULL
ΤI
       Formulations and methods for reducing skin irritation
IN
       Hahn, Gary S., Cardiff by the Sea, CA, UNITED STATES
       Thueson, David O., Poway, CA, UNITED STATES
PT
       US 2003124202
                          A1
                               20030703
ΑI
       US 2002-189344
                          A1
                               20020703 (10)
       Continuation of Ser. No. US 2001-33194, filed on 24 Oct 2001, PENDING
RLI
       Continuation of Ser. No. US 2001-853282, filed on 11 May 2001, PENDING
       Continuation of Ser. No. US 2000-685992, filed on 10 Oct 2000, ABANDONED
       Continuation of Ser. No. US 1997-860993, filed on 23 Jun 1997, GRANTED,
       Pat. No. US 6139850 Continuation-in-part of Ser. No. US 1994-362100,
       filed on 21 Dec 1994, GRANTED, Pat. No. US 5716625 Continuation-in-part
       of Ser. No. WO 1995-US16985, filed on 21 Dec 1995, PENDING
DT
       Utility
FS
       APPLICATION
       Cosmederm Technologies, LLC, 4370 La Jolla Village Drive, Suite 960, San
LREP
       Diego, CA, 92122
CLMN
       Number of Claims: 92
ECL
       Exemplary Claim: 1
DRWN
       13 Drawing Page(s)
LN.CNT 1619
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Compositions and methods are provided for inhibiting skin irritations
       attributable to chemical irritants or environmental conditions by the
       application of anti-irritant amounts of aqueous-soluble divalent
       strontium cation.
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AN

2003:180375 USPATFULL

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. which the active drug ingredients are formulated may also
SUMM
       produce irritation in sensitive people, especially in drugs such as
       topical corticosteroids.
SUMM
               as retinoids (e.g. tretinoin, retinol and retinal), carboxylic
       acids including \alpha-hydroxy acids (e.g. lactic acid, glycolic acid),
       β-hydroxy acids (e.g. salicylic acid),
       \alpha-keto acids, acetic acid and trichloroacetic
       acid, 1-pyrrolidone-5-carboxylic acid, capryloyl
       salicylic acid, \alpha-hydroxy decanoic acid,
       \alpha-hydroxy octanoic acid, gluconolactone, methoxypropyl
       gluconamide, oxalic acid, malic acid, tartaric acid, mandelic acid,
       benzylic acid, gluconic. .
SUMM
               the irritation caused by such products. Common exfolients
       include \alpha- and \beta-hydroxy carboxylic acids such as lactic
       acid, glycolic acid, salicylic acid and the like,
       \alpha-keto acids such as pyruvic acid, as well as assorted compounds
       such as acetic acid and trichloroacetic acid,
       1-pyrrolidone-5-carboxylic acid, capryloyl salicylic
       acid, \alpha-hydroxy decanoic acid, \alpha-hydroxy octanoic
       acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic
       acid, tartaric acid, mandelic acid, benzylic acid, gluconic.
SUMM
                topical application of the hydroxy acid skin irritant lactic
       acid as well as the skin irritants glycolic acid, capsaicin, capryloyl
       salicylic acid, benzoyl peroxide, and
       post-shaving-applied seawater. Formulations containing the strontium
       cation are useful in suppressing a wide range of topical-product-induced
       irritation.
SUMM
                example in which the vehicle has a density of 0.93 q/ml (as in
       a 50:50 [by volume] mixture of 95% ethyl alcohol and
       water) and the cation component is incorporated in the form of strontium
       nitrate (formula weight 212), represent molarity concentration.
SUMM
               components) as water; organic solvents such as alcohols
       (particularly lower alcohols readily capable of evaporating from the
       skin such as ethanol), glycols (such as glycerin), aliphatic
       alcohols (such as lanolin); mixtures of water and organic solvents (such
       as water and alcohol),.
DETD
               skin irritation caused by certain severe skin irritants,
       including particularly lactic acid and glycolic acid (which are hydroxy
       acids), capryloyl salicylic acid (a \beta-hydroxy
       acid ester) and capsaicin (an isolate from cayenne and paprika known for
       its skin-irritating properties). The trials were.
DETD
               of the subjects. In the majority of the tests, the irritant
       composition was 7.5% lactic acid dissolved in a 10% ethanol
       -in-water solution.
DETD
               of the irritant composition. Controls were performed by
       applying corresponding formulation(s) (pretreatment and/or skin-irritant
       composition) with an equimolar amount of sodium
       chloride to a contralateral portion of the subject's skin.
       Typically, the test materials were applied to the face of the subject.
DETD
             . Chloride
                            SrCl.sub.2
                                            VIS DIFFERENCE
Strontium Nitrate
                       Sr(NO.sub.3).sub.2 VIS DIFFERENCE
                       Sr(CH.sub.3CO.sub.2).sub.2 VIS DIFFERENCE
                                                                        46
Strontium Acetate
TIME ZERO TESTS
Strontium Chloride
                       SrCl.sub.2
                                       10% EtOH
                       Sr(NO.sub.3).sub.2 10% EtOH
Strontium Nitrate
                test compounds of the invention were formulated in Elizabeth
       Arden "Visible Difference Refining Toner", with the Toner mixed with
       equimolar sodium chloride serving as the control.
       The test solutions (and control) were provided in coded vials for
       application to either the right.
DETD
       [0079] Following a protocol parallel to that of the lactic acid irritant
       trials described above, glycolic acid (6.0% in 10% ethanol
       -in-water) was applied as a skin irritant to subject panels. Strontium
```

nitrate was co-administered as an anti-irritant (time zero testing), and. . .

- DETD . . . subject females. The control solution was Vaseline Smooth Legs and Feet Lotion (containing water, lactic acid (5%), glycerin, isopropyl palmitate, PEG-40 stearate, cetyl alcohol, potassium hydroxide, steareth-2, magnesium aluminum silicate, lecithin, soya sterol, tocopheryl acetate, tetinyl palmitate, dimethicone, menthol, camphor, stearic acid, laureth-7, xanthan gum, polyacrylamide, C13-14 isoparaffin, corn oil, fragrance, DMDM hydantoin, iodopropynyl butylcarmamate, disodium EDTA, PG, and. . .
- DETD . . . cyclomethicone (Dow Corning, "DC344"), 7.5 ml cyclomethicone/dimethiconol (Dow Corning, "DC1401"), 7.5 ml cyclomethicone/dimethicone copolyol (Dow Corning, "DC3225C") and 8 ml PEG-8 and blended for 2-3 minutes. Imidizolidinyl urea (0.5%) was added as a preservative. A clear, thick gel resulted (50 ml).
- DETD . . . of the salt with Mary Kay Revival Serum (with 15% lactic acid) and L'Oreal Vichy Novactia Cream (with 2% capryloyl salicylic acid), respectively.
- CLM What is claimed is:
  15. The composition of claim 12 wherein said irritant ingredient comprises salicylic acid or a salt thereof.
  - 16. The composition of claim 12 wherein said irritant ingredient comprises a combination of lactic acid and salicylic acid, or salts thereof.
  - 17. The composition of claim 12 wherein said irritant ingredient comprises capryloyl **salicylic acid** or a salt thereof.
  - 23. The composition of claim 12 wherein said irritant ingredient comprises trichloroacetic acid of a salt thereof.
- 50-21-5, Lactic acid, biological studies 57-13-6, Urea, biological IT 58-08-2, Caffeine, biological studies 64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7, Salicylic acid, biological studies 76-03-9, Trichloroacetic acid, biological 76-93-7, biological studies 77-92-9, Citric acid, biological studies 79-14-1, Glycolic acid, biological studies 87-69-4, Tartaric studies acid, biological studies 90-64-2, Mandelic acid 90-80-2, Gluconolactone 94-36-0, Benzoyl peroxide, biological studies 108-95-2, Phenol, biological studies 116-31-4, Allantoin 98-79-3 127-17-3, Pyruvic acid, biological studies 144-62-7, Oxalic Retinal 302-79-4, Tretinoin 515-69-5, acid, biological studies 526-95-4, Gluconic acid 543-94-2, Strontium acetate α-Bisabolol 1405-86-3, Glycyrrhizic acid 617-73-2,  $\alpha$ -Hydroxyoctanoic acid 6915-15-7, Malic acid 5393-81-7,  $\alpha$ -Hydroxydecanoic acid 7440-24-6, Strontium, biological studies 7759-02-6, Strontium sulfate 10042-76-9, Strontium nitrate 10476-85-4, Strontium chloride 126094-21-1 70424-62-3 (strontium cation formulations for reducing skin irritation)

## L130 ANSWER 3 OF 8 USPATFULL on STN

AN 2002:246386 USPATFULL

- TI Method of applying an adhesive composition over a bioactive polymerization initiator or accelerator
- IN Narang, Upvan, Raleigh, NC, United States
  Hedgpeth, Daniel L., Raleigh, NC, United States
  Szabo, Gabriel N., Raleigh, NC, United States
  Badejo, Ibraheem T., Morrisville, NC, United States
  Barefoot, Joe B., Raleigh, NC, United States
- PA Closure Medical Corporation, Raleigh, NC, United States (U.S. corporation)

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US 6455064
PΙ
                               20020924
                          B1
       US 1999-430176
                               19991029 (9)
AΙ
RLI
       Continuation-in-part of Ser. No. US 1998-69875, filed on 30 Apr 1998
       Utility
DT
       GRANTED
FS
      Primary Examiner: Dees, Jose' G.; Assistant Examiner: Williamson,
EXNAM
       Michael A.
       Oliff & Berridge, PLC
LREP
      Number of Claims: 47
CLMN
ECL
       Exemplary Claim: 1
       0 Drawing Figure(s); 0 Drawing Page(s)
DRWN
LN.CNT 1181
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A composition comprising a polymerizable adhesive monomer is applied
AB
       over a biologically active initiator or accelerator for polymerization
       of the monomer. The biologically active initiator or accelerator is a
       medicament that provides a desired medical or therapeutic activity as
       well as enhancing polymerization of the adhesive.
ΑN
       2002:246386 USPATFULL
ΑI
       US 1999-430176
                               19991029 (9)
SUMM
            . bioactive agents is also disclosed in: Miles et al., Oral
       Surgery, Oral Medicine, Oral Pathology, Vol. 75, No. 3,397-402 (using
       triamcinolone acetonide (Kenalog) or chlorhexidine digluconate
       (Peridex) as the bioactive agent); and Kaufman, R. S., The Laryngoscope,
       1974, 793-804 (using dexamethasone sodium phosphate (Decadron)
       as the bioactive agent).
SUMM
                not to affect the cure rate or the bond strength of the glue
       layer. They include thymol, chlorothymol, benzoic acid, p-
       hydroxybenzoate alkyl esters, 4- and 6-phenyl-2-chlorophenyl,
       carvocrol, hexachlorophene, nitroforans, allicin, 2-phenylphenol, boric
       acid, mercurials, and such antibiotics as Bacitracin and Griseofulvin,
       quaternary ammonium halides such as n-alkyldirnethylbenzylammonium
       chloride, cetyl pyridinium bromide, 5-methyl-2-isopropyl-cyclohexanol,
       2-bornanone, cineole, safrole, bornyl chloride, 2-phenoxyethanol,
       benzylalcohol and ethanol. The biocides are applied to human
       fingernails, then covered by solutions comprising cyanoacrylate
       adhesive. The biocides are applied to the.
SUMM
               mixtures thereof. Preferred plasticizers are tributyl citrate
       and acetyl tributyl citrate. In embodiments, suitable plasticizers
       include polymeric plasticizers, such as polyethylene
       glycol (PEG) esters and capped PEG esters or
       ethers, polyester glutarates and polyester adipates.
               2,4-dinitrophenol (pK.sub.a4.0), formic acid (pK.sub.a3.7),
SUMM
      nitrous acid (pK.sub.a3.3), hydrofluoric acid (pK.sub.a3.2),
       chloroacetic acid (pK.sub.a2.9), phosphoric acid (pK.sub.a2.2),
       dichloroacetic acid (pK.sub.a1.3), trichloroacetic
       acid (pK.sub.a0.7), 2,4,6-trinitrophenol (picric acid)
       (pK.sub.a0.3), trifluoroacetic acid (pK.sub.a0.2), sulfuric acid
       (pK.sub.a3.0), sulfurous acid, and mixtures thereof. In embodiments, the
       amount.
SUMM
                (Florida Chemical Co.), cold pressed lime oil (Florida Chemical
      Co.), cucumber distillate (Florida Chemical Co.), honey distillate
       (Florida Chemical Co.), menthol (Aldrich), alkyl salicylates
       such as methyl salicylate (Lorann Oils or Aldrich), monosodium
      glutamate, spearmint, wintergreen, cinnamon, citrus, cherry, apple,
      peppermint,.
             . are not limited to, waxes, such as carnauba, petroleum and
SUMM
      carbowax; gels, such as gelatin, hydroxypropyl methylcellulose,
      carboxymethylcellulose, and hydroxy-gels; polyethylene
      glycol; polysorbate; agar; povidone; sodium stearate; starch;
      powdered sugar; high fructose corn syrup; fructose; glycerin;
      hydrogenated glucose syrup; sorbitol; mannitol; sucrose; cellulose
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acetate phthalate; dextrose; polyvinyl alcohol;

mixtures thereof; and the like. SUMM Suitable alcohols include phenols, 1,4-butanediol, d-sorbitol, and polyvinyl alcohol. CLM What is claimed is: pressed valencia orange oil, cold pressed grapefruit oil, cold pressed lemon oil, cold pressed lime oil, cucumber distillate, honey distillate, menthol, alkyl salicylates, monosodium glutamate, spearmint, wintergreen, cinnamon, citrus, cherry, apple, peppermint, peppermint oil, peppermint spirit, vanillin, thymol, and ethyl vanillin. IT 69-72-7D, Salicylic acid, alkyl esters 89-78-1, Menthol 89-83-8, Thymol 100-52-7, Benzaldehyde, biological studies 104-46-1, 121-32-4, Ethyl vanillin 121-33-5, Vanillin 142-47-2, Monosodium glutamate 25916-47-6, Poly(acrylic acid), zinc salt 336804-71-8, Poly(cyanoacrylic acid), zinc salt (medical adhesive compns. containing monomers and bioactive polymerization initiators or accelerators) L130 ANSWER 4 OF 8 USPATFULL on STN 2000:174129 USPATFULL ANTI Preparation for the application of agents in mini-droplets IN Cevc, Gregor, Heimstetten, Germany, Federal Republic of PA Idea AG, Munich, Germany, Federal Republic of (non-U.S. corporation) PТ US &165500 20001226 US 1992-844664 ΑI 19920408 (7) <--PRAI DE 1990-4026834 19900824 < - -DE 1990-4026833 19900824 <--DE 1991-4107153 19910306 <--WO 1991-EP1596 19910822 <--DTUtility FS Granted EXNAM Primary Examiner: Kishore, Gollamudi S. LREP Davidson, Davidson & Kappel, LLC CLMN Number of Claims: 35 ECLExemplary Claim: 1 DRWN 31 Drawing Figure(s); 21 Drawing Page(s) LN.CNT 4336 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB The invention relates to a preparation for the application of agents in the form of minuscule droplets of fluid, in particular provided with membrane-like structures consisting of one or several layers of amphiphilic molecules, or an amphiphilic carrier substance, in particular for transporting the agent into and through natural barriers such as skin and similar materials. The preparation contains a concentration of edge active substances which amounts to up to 99 mol-% of the agent concentration which is required for the induction of droplet solubilization. Such preparations are suitable, for example, for the non-invasive applications of antidiabetics, in particular of insulin. The invention, moreover, relates to the methods for the preparation of such formulations. AN 2000:174129 USPATFULL ΡI US 6165500 20001226 ΑI US 1992-844664 19920408 (7) <--PRAI DE 1990-4026834 19900824 <--PRAI DE 1990-4026833 19900824 <--PRAI DE 1991-4107153 19910306 <--PRAI WO 1991-EP1596 19910822 <--. prolonged drug action but has not increased the SUMM skin-penetration capability of the drug itself. Through massive use of penetration enhancers (polyethylene glycol and fatty

acids) and of lipid vesicles, Gesztes und Mezei (1988, Anesth. Analg.

. . are to some extent edge active only in certain concentration

67, 1079-1081) have succeeded in inducing local.

DETD

DETD

DETD

DETD

DETD

DETD

DETD

DETD

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ranges encompass simple, especially short chain, alcohols, such as
methanol, ethanol, n-propanol, 2-propen-1-ol(allylalcohol),
n-butanol, 2-buten-1-ol, n-pentanol (amylalcohol), n-hexanol,
n-heptanol, n-octanol and n-decanol; furthermore, iso-propanol,
iso-butanol or iso-pentanol. Higher alcohols are even. .
present purpose as well as cyclic alcohols, such as benzylalcohol,
cyclopentanol, cyclohexanol, 3-, 4-, 5-cyclohexanol, cyclohexylalcohol,
aryl-alcohols, such as phenyl-ethanol, etc.
Sorbitol is one possible example of residue Z. (X.sub.i --Y.sub.j) can
be a polyene, polyoxyalkene, such as polyoxyethylene,
polyalcohol, such as polyglycol, or polyether. (X.sub.i --Y.sub.j)
mainly contain 1-20 and very frequently 2-10 units, e.g. in ethylene
glycol, di- and triglycol (oligoglycol) or polyethylene
glycol.
         surfactants of the ether-type which are suitable for the
present purpose are the substances of the Myrj trademark, such as
polyoxyethylene(8)-stearate (Myrj45), polyoxyethylene
(20) -stearate (Myrj49), polyoxyethylene(30) -stearate (Myrj51),
polyoxyethylene (40) - stearate (Myrj52), polyoxyethylene
(50)-stearate (Myrj53), polyoxyethylene(100)-stearate
(Myrj59), etc. Further products of these classes are sold under the
trademark Cirrasol ALN; common polyoxyethylene-alkylamides are
e.g. surfactants of the trademark Atplus.
  . R.sub.3 and R.sub.4 are frequently of the alkoxy- or alkenoxy-,
and even more commonly of the polyene-, polyoxyalkene-, such as
polyoxyethylene-, polyalcohol-, such as polyglycol-, or
polyether type. Some of these chains can be apolar, corresponding to
e.g. an acyl-, alkyl-,.
Chains in the substances of TWEEN type are very frequently of the
polyoxyethylene class. They mainly contain one terminal hydrogen
atom and more rarely a methoxy group. One of the polyoxyethylene
chains, however, contains a hydrophobic residue which preferably
corresponds to an acyl-, alkyl-, alkenyl-, hydroxyalkyl-,
hydroxyalkenyl- or hydroxyacyl-chain with 4-24,.
         this case is cationic, in order to ensure that the whole
molecule is zwitterionic. Most frequently, ammonio-alkyl derivatives,
such as ethanol-, propanol-, butanol-, pentanolamine,
hexanolamine, heptanolamine or octanolamine, N-methyl-, N,N-dimethyl, or
N,N,N-trimethyl-ammonio-alkyl, N-ethyl-, N,N-diethyl, or
N,N,N-triethyl-amino-alkyl, unequal N-alkyles, such as
N, N-methyl-ethyl-ammonio-alkyl,.
        PX, Thesit), nonyl-glucoside, octaethylene-glycol-
isotridecylether (Genapol X-080), octaethylene-dodecyl-ether,
octanoyl-N-methyl-glucamide (MEGA-8), 3-(octyldimethylammonio)-
propanesulfonate (Zwittergent 3-08), octyl-glucoside,
octylthioglucoside, entadecaethylene-isotridecyl-ether (Genapol X-150),
polyethylene-polypropylene-glycol (Pluronic F-127),
polyoxyethylene-sorbitane-monolaurate (Tween 20),
polyoxyethylene-sorbitane-monooleate (Tween 80),
taurodeoxycholate-sodium salt, taurocholate-sodium salt,
3-(tetradecyldimethylammonio)-propane-sulfonate (Zwittergent 3-14), etc.
         salts (sodium dodecylsulfate, Duponol C, SDS, Texapon K12),
N-hexadecyl-sulfobetaine (Zwittergent 3-16), nonaethylene-glycol-octyl-
phenyl-ether (NP-40, Nonidet P-40), nonaethylene-dodecyl-ether,
octaethylene-qlycol-isotridecyl-ether (Genapol X-080),
octaethylene-dodecyl-ether, polyethylene glycol
-20-sorbitane-monolaurate (Tween 20), polyethylene
glycol-20-sorbitane-monostearate (Tween 60),
polyethylene glycol-20-sorbitane-monooleate (Tween
80), polyhydroxyethylenecetylstearylether (Cetomacrogo, Cremophor 0,
Eumulgin, C 1000) polyhydroxyethylene-4-laurylether (Brij 30),
polyhydroxyethylene-23-laurylether (Brij 35), polyhydroxyethylene-8-
stearate (Myrj 45, Cremophor AP),. . . oil (Cremophor RH 40,
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DETD

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DETD

DETD

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DETD

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Cremophor RH 60) polyethoxylated plant oils (Lebrafils),
       sorbitane-monolaurate (Arlacel 20, Span 20), taurodeoxycholate salts,
       taurocholate salts, polyethylene glycol
       -20-sorbitane-palmitate (Tween 40), Myrj 49 and polyethylene
      glycol derivatives of ricinols, etc.
         . . phenylbutazone-derivatives (such as 3,5 pyrazolidine dion),
      pherazone, piroxicam, propoxyphene, propyphenazon, pyrazol- and
      phenazone-derivatives (aminophenazone, metamizole, monophenylbutazone,
      oxyphenebutazone, phenylbutazone or phenazonesalyzilate),
       salicylic acid-derivatives, sulfasalazine, tilidine;
       acetylsalicylic acid, ethylmorphine, alclofenac, alphaprodine,
       aminophenazone, anileridine, azapropazone, benfotiamine, benorilate,
      benzydamine, cetobemidone, chlorophenesincarbamate, chlorothenoxazine,
       codeine, dextromoramide, dextro-propoxyphene, ethoheptazine,.
            . as aminophenazole, bemegride, caffeine, doxapram, ephedrine,
      prolintane, or nialamide and tranylcypromine; but also vitamins, plant
       extracts from semen colae, camphor, menthol;
              least one substance from the class of antiallergics: e.g.
      agents from the globuline family, corticoids or antihistaminics (such as
      beclometasone-, betametasonecortisone-, dexametasone
       -derivatives, etc.) as well as bamipinacetate, buclizine, clemastine,
       clemizole, cromoglicinic acid, cyproheptadine, diflucorolonvalerate,
       dimetotiazine, diphenhydramine, diphenylpyraline, ephedrine,
       fluocinolane, histapyrrodine, isothipendyle, methadilazine,.
               the antiasthmatics and/or bronchospasmolytics, such as
       amiodarone, carbuterol, fenoterol, orciprenalin, sotalol, or
       theophilline-derivatives, as well as corticoids (such as beclomethasone,
       dexamethasone, hydrocortisone, prednisolone), frequently in
       combination with purines;
                or vitamins, etc., are preferred for this purpose, as well as
       antiphlogistics, such as quinine, nicotinic acid-, nonylic acid-, or
       salicylic acid-derivatives, meprobamate, etc.;
       at least one glucocorticoid, such as beclomethason, betamethason
DETD
       , clocortolone, cloprednol, cortison, dexamethason (e.g. as a
       dexamethasonephosphate), fludrocortison, fludroxycortide,
       flumetason, fluocinolonacetonide, fluocinonide, fluocortolon (e.g. as a
       fluocortoloncapronate or fluocortolontrimethylacetate), fluorometholon,
       fluprednidenacetate, hydrocortison (also as a hydrocortison-21-acetate,
       hydrocortison-21-phosphate, etc.), paramethason, prednisolon (e.g. in
       the form of methylprednisolon, prednisolon-21-phosphate,
       prednisolon-21-sulfobenzoate, etc.), prednison, prednyliden,
       pregnenolon, triamcinolon, triamcinolonacetonide,
       etc.;
DETD
                (Methyl 4-methylpyrrole 2-carboxylate) cis-13-octadecenal
       13-octadecyn-1-ol, 2-(phenyl)ethyl propionate(phenylethanol propanoate),
       propyl cyclohexylacetate, cis-9,trans-11-tetradecadienol
       ([Z,E]-9,11-TDDOL), cis-9, trans-11-tetradecadienyl acetate
       ([Z,E]-9,11-TDDA), cis-9, trans-12-tetradecadienyl acetate
       ([Z,E]-9,12-TDDA), trichloroacetic acid esters,
       cis-9-tricosene, undecanal, etc.;
            . myeloperoxidase (1.11.1.7), peroxidase (1.11.1.7), glutathione
DETD
       peroxidase (1.11.1.9), chloroperoxidase (1.11.1.10), lipoxidase
       (1.13.1.12), protocatechuate 3,4-dioxygenase (1.13.11.3), luciferase
       (qlow-worm) (1.13.12.7), salicylate hydroxylase (1.14.13.7), p-
       hydroxybenzoate hydroxylase (1.14.13.2), luciferase (bacterial)
       (1.14.14.3), phenylalanine hydroxylase (1.14.16.1), dopamine-beta-
       hydroxylase (1.14.17.1), tyrosinase (1.14.18.1), superoxide dismutase
       (1.15.1.1), ferredoxine-NADP reductase (1.18.1.2), etc.. Transferases,.
                halogenated, aliphatic, cycloaliphatic, aromatic or
       aromatic-aliphatic hydrocarbons, such as benzol, toluol, methylene
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chloride or chloroform, alcohols, such as methanol or ethanol,

propanediol, erithritol, short-chain alkane carboxylic acid esters, such

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as acetic acid acid alkylesters, such as diethylether, dioxan or
       tetrahydrofuran, or. . .
DETD
250-372 mg phosphatidylcholine from soy-bean (+95% = PC)
187-34.9 mg
           oleic acid (+99%)
0.312-0.465 ml
             ethanol, absolute
10 mM
           Hepes
DETD
322.6-372 mg
           phosphatidycholine from soy-bean (+95% = PC)
96.8-34.9 mg
           oleic acid (+99%)
0.403-0.465 ml
             ethanol, absolute
10 mM
           Hepes
130 mM
           NaCl, p.a.
DETD
          . . phosphatidylcholine from soy-bean (+95% = PC)
20.5-22.2 mg
           phosphatidylglycerol from egg PC (puriss.,
           Na-salt, = PG
44.9-26.1 μl
           oleic acid (+99%)
0.165-0.178 ml
             ethanol, absolute
4.5 ml
           Hepes, 10 mM
DETD
301.3-335.4 mg
           phosphatidylcholine from soy-bean (+95% = PC)
123.3-80.8 μl
           Tween 80 (puriss.)
0.38-0.42 ml
             ethanol, absolute
4.5 ml
           phosphate buffer, isotonic, sterile
DETD
193-361 mg
          phosphatidylcholine from soy-bean (grade I, S100)
207.2-38.8 mg
          Na-cholate, puriss.
4.5 ml
          phosphate buffer (isotonic with a physiologic
          solution)
            ethanol, absolute
DETD
       0.5 ml of a hot solution of S100 in ethanol (2/1, M/V) are
       mixed with sufficient amounts of bile acid salts which give rise to a
       concentration series with increasing.
DETD
121.2-418.3 mg
             phosphatidylcholine from soy-bean (Grade I,
PC) 378.8-81.7 mg
             Triton X-100
             0.9% NaCl solution in water
4.5 ml
DETD
       A 10% PC-suspension in isotonic solution of sodium
       chloride is homogenized at 22° C. until the mean size of
       lipid vesicles is approx. 400 nm. This suspension is then.
DETD
101.6-227 mg phosphatidylcholine from soy-bean
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148.4-22.2 mg octyl-glucopyranoside (β-octylglucoside),
puriss. 9.85 ml
              phosphate buffer, pH 7.3
                ethanol, absolute
DETD
       Phosphatidylcholine in ethanol (50%) and octylglucopyranoside
       were mixed in different relative ratios in order to prepare a
       concentration series with increasing L/S values. .
DETD
84.2 to 25 mg
             phosphatidylcholine from soy-bean 80%
75 kBq
             Giberellin A4, 3H-labelled
15.8 to 75 mg
               polyoxyethylene (23)-laurylether (Brij 35)
1 ml
             water
               ethanol, absolute
DETD
                dipalmitoylphosphatidylcholine in a chloroform solution. The
       resulting lipid mixture is dried and then dissolved in 30 microliters of
       warm, absolute ethanol. This solution is then mixed with 0.32
       ml of a buffer solution (phosphate buffer, 10 mM, 0.9% NaCl);
       this corresponds to a lipid/surfactant ratio of 4/1. The resulting
       suspension is thoroughly mixed and subsequently filtered through filters
       with.
DETD
          phosphatidylcholine from soy-bean (purity higher
88 mg
          than 95%, PC)
75 kBq
          insulin, tritium labelled
12 mg
          deoxycholate, Na-salt, p.a.
100 ml
          ethanol, absolute
0.9 ml
          isotonic salt solution
DETD
       100 mg of PC dissolved in 100 ml of warm ethanol, or a
       corresponding PC/deoxycholate solution (L/S=4.5), are mixed with 0.9 ml
       of an isotonic salt solution (suspensions A and B,.
DETD
           phosphatidylcholine from soy-bean
386 mg
           (purity > 95%)
58.5 mg
           sodium-cholate (L/S = 3.5)
500 ml
           ethanol (96%)
2.25 ml
           0.9% NaCl solution (per inject.)
2.25 ml
           Actrapid HM 40 (corresponds to 90 I.U. of
           recombinant human insulin)
DETD
                mixture of aqueous salt solution and human recombinant insulin
       (with 6.75 mg m-cresole) is mixed with a lipid solution in
       ethanol. The resulting, opaque suspension is aged over night. 12
       hours later, this suspension is pressed through a sterile filter
       (Anodisc,.
DETD
            phosphatidylcholine from soy-bean (+95%)
956 mg
            sodium-deoxycholate
0-26 mg
1 mg
            prostaglandine E1
1 ml
            ethanol absolute
50 ml
            0.9% NaCl solution (per inject.)
DETD
       1 ml of ethanol is pipetted into a glass flask with 1 mg of
       prostaglandine. After thorough mixing, the resulting prostaglandine
       solution is transferred.
                                . . with 6 ml of an isotonic salt solution.
       The prostaglandine containing flask is washed twice with 2 ml of 0.9%
       NaCl and mixed with the original lipid suspension. The sample is
       then divided into 5 parts; into individual aliquots sodium-desoxycholate
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is. .

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DETD
79.4 mg; 88.5 mg
             phosphatidylcholine from soy-bean (+95%)
20.6 mg, 11.5 mg
             sodium-deoxycholate
          hydrocortison
10 µg
             ethanol absolute
0.1 ml
             phosphate buffer, physiological
1 ml
DETD
256.4-447 mg
            phosphatidylcholine from soy-bean (+95% PC)
243.6-53.1 mg
            Brij 96
0.26 - 0.45 \text{ ml}
              ethanol, absolute
4.5 ml
            phosphate buffer, pH 6.5. 10 mM
DETD
202.0-413 mg
           phosphatidylcholine from soy-bean (+95% = PC)
298.0-87.0 mg
           Myrj 49
0.26-0.45 ml
             ethanol, absolute
4.5 ml
           phosphate buffer, pH 6.5. 10 mM
DETD
144.9 mg
              phosphatidylcholine from soy-bean
24.8 mg
              desoxycholate, Na-salt
1.45 ml
              Actrapid HM 100 (145 I.U.)
0.16 ml
              ethanol, absolute
DETD
       Appropriate quantities of both lipids are dissolved in corresponding
       amounts of ethanol and mixed with a standard solution of
       insulin. 12 hours later, the crude carrier suspension is homogenized by
       means of.
DETD
                alkylsulfate-salts, cholate-, deoxycholate-,
       glycodeoxycholate-, taurodeoxycholate-salts, dodecyl-dimethyl-aminoxide,
       decanoyl- or dodecanoyl-N-methylglucamide (MEGA 10, MEGA 12),
       N-dodecyl-N, N-dimethylglycine, 3-(hexadecyldimethylammonio)-
       propanesulfonate, N-hexadecylsulfobetaine, nonaethyleneglycol-
       octylphenylether, nonaethylene-dodecylether, octaethyleneglycol-
       isotridecylether, octaethylene-dodecylether, polyethylene
       glycol-20-sorbitane-monolaurate (Tween 20), polyethylene
       glycol-20-sorbitane-monooleate (Tween 80),
       polyhydroxyethylenecetylstearylether (Cetomacrogo, Cremophor O,
       Eumulgin, C 1000) polyhydroxyethylene-4-laurylether (Brij 30),
       polyhydroxyethylene-23-laurylether (Brij 35), polyhydroxyethylene-8-
       stearate (Myrj 45, Cremophor AP),.
DETD
120 mg
           phosphatidylcholine from soy-bean
           (purity > 95%)
20 mg
           sodium-cholate p.a. (L/D = 3.2)
150 µl
         ethanol (96%)
1.45 ml
           Actrapid HM 100 (recombinant human insulin
           100 I.U./ml)
DETD
           phosphatidylcholine from soy-bean (487 µl of a
216 mg
           50% solution in absolute ethanol)
           phosphatidylglycerol from egg (98%)
27 mg
29.45 mg
           oleic acid, puriss.
```

```
Actrapid HM 100 (recombinant human insulin 100
3 ml
           I.U. /ml)
        1N NaOH
40 µl
        1N NaCl
20 µl
DETD
       The lipids are dissolved in a glass vial in 0.15 ml abs. ethanol
       and then combined with a standard insulin solution. Further procedure is
       as described in example 239.
DETD
144.9; 152 mg
               phosphatidylcholine from soy-bean
24.8; 17.6 mg desoxycholate, Na-salt
1.45; 1.55 ml Actrapid HM 100 (145 I.U.)
0.16 ml
               ethanol, absolute
DETD
       Lipids are weighed into glass vials, dissolved with ethanol
       and mixed with an insulin solution. The resulting opaque suspension is
       aged over night and subsequently filtered through a 0.22.
CLM
       What is claimed is:
          hydrated castor oil, sorbitanemonolaurate, lauryl- salts,
       oleoylsulfate-salts, sodium deoxycholate, sodium glycodeoxycholate,
       sodium oleate, sodium elaidate, sodium linoleate, sodium laurage,
       nonaethylene-dodecylether, polyethylene glycol
       -20-sorbitane-monooleate, polyhydroxyethylene-23-laurylether,
       polyhydroxyethylene-40-stearate, a sorbitane phospholipid a monolaurate
       phospholipid and a lysophospholipid.
       35. The method of claim 1, wherein the agent is selected from the group
       consisting of an adrenocorticosteroid or its analogues, an
       androgen, an antiandrogen, an anabolic steroid, an anaesthetic, an
       analgesic, an antiallergic, an antiarrhythmic, an antiarterosclerotic,.
IT
      Adrenergic agonists
IT
      Adrenergic antagonists
IT
      Allergy inhibitors
IT
      Anabolic agents
IT
      Analgesics
IT
      Anesthetics
IT
      Antiarrhythmics
IT
      Antibiotics
IT
      Anticoagulants and Antithrombotics
IT
      Anticonvulsants and Antiepileptics
IT
      Antidepressants
IT
      Antidiabetics and Hypoglycemics
IT
      Antiemetics
IT
      Antihistaminics
IT
      Antipyretics
IT
      Bactericides, Disinfectants, and Antiseptics
IT
      Bronchodilators
IT
      Cardiotonics
IT
      Cholinergic antagonists
IT
      Contraceptives
IT
      Cytotoxic agents
IT
      Diuretics
IT
      Fungicides and Fungistats
IT
      Ganglionic blocking agents
IT
      Hemostatics
ΙT
      Hypnotics and Sedatives
IT
      Immunomodulators
ΙT
      Inflammation inhibitors
IT
      Muscle relaxants
IT
     Mydriatics
ΙT
     Narcotics
```

IT

Nervous system stimulants

```
IT
      Parasiticides
      Pesticides
IT
      Poisoning
IT
      Tuberculostatics
IT
      Vasoconstrictors
IT
      Vasodilators
IT
      Virucides and Virustats
IT
      Wound healing promoters
IT
IT
      Androgens
IT
      Coenzymes
ΙT
      Corticosteroids, biological studies
ΙT
      Enzymes
IT
      Immunoglobulins
        (transferosomes containing)
IT
      Corticosteroids, biological studies
        (gluco-, transferosomes containing)
L130 ANSWER 5 OF 8 USPATFULL on STN
AN
       2000:145896 USPATFULL
       Formulations and methods for reducing skin irritation
ΤI
IN
       Hahn, Gary S., Cardiff by the Sea, CA, United States
       Thueson, David O., Poway, CA, United States
       Cosmederm Technologies, La Jolla, CA, United States (U.S. corporation)
PA
PΙ
       US 6139850)
                                20001031
       WO 9619184 19960627
       US 1997-860993
                                19970623 (8)
AΙ
                                                                      < - -
       WO 1995-US16985
                                19951221
                                19970623 PCT 371 date
                                19970623 PCT 102(e) date
       Continuation-in-part of Ser. No. US 1994-362100, filed on 22 Dec 1994,
RLI
       now patented, Pat. No. US 5716625
DT
       Utility
       Granted
EXNAM
       Primary Examiner: Page, Thurman K.; Assistant Examiner: Channavajjala,
       Lyon & Lyon LLP
LREP
       Number of Claims: 113
CLMN
ECL
       Exemplary Claim: 1
DRWN
       25 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 1834
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Composition and methods are provided for inhibiting skin irritation
AB
       attributable to chemical irritants or environmental conditions, by the
       application of an anti-irritant amount of aqueous-soluble strontium
       cation.
       2000:145896 USPATFULL
AN
                                20001031
PΙ
       US 6139850
                                                                      < - -
       WO 9619184 19960627
       US 1997-860993
                                19970623 (8)
ΑI
                                                                      <--
       WO 1995-US16985
                                19951221
                                         PCT 371 date
                                19970623
                                19970623 PCT 102(e) date
SUMM
                drug ingredients are formulated may also produce irritation in
       sensitive people, especially in the case of drugs such as topical
       corticosteroids.
SUMM
                as retinoids (e.g. tretinoin, retinol and retinal), carboxylic
       acids including \alpha-hydroxy acids (e.g. lactic acid, glycolic acid),
       β-hydroxy acids (e.g. salicylic acid),
       α-keto acids, acetic acid and trichloroacetic
       acid, 1-pyrrolidone-5-carboxylic acid, capryloyl
       salicylic acid, ahydroxy decanoic acid,
       α-hydroxy octanoic acid, gluconolactone, methoxypropyl
       gluconamide, oxalic acid, malic acid, tartaric acid, mandelic acid,
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```
benzylic acid, gluconic.
SUMM
       . . . prevent the irritation caused by such products. Common
       exfoliants include \alpha-and \beta-hydroxy carboxylic acids such as
       lactic acid, glycolic acid, salicylic acid and the
       like, \alpha-keto acids such as pyruvic acid, as well as assorted
       compounds such as acetic acid and trichloroacetic acid
       , 1-pyrrolidone-5-carboxylic acid, capryloyl salicylic
       acid, \alpha-hydroxy decanoic acid, \alpha-hydroxy octanoic
       acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic
       acid, tartaric acid, mandelic acid, benzylic acid, gluconic.
DETD
          . . topical application of the hydroxy acid skin irritant lactic
       acid as well as the skin irritants glycolic acid, capsaicin, capryloyl
       salicylic acid, benzoyl peroxide, and
       post-shaving-applied seawater. Formulations containing the strontium
       cation are useful in suppressing a wide range of topical-product-induced
       irritation. . . phenols, peroxides and similar irritants found in
       over-the-counter topical products for home or cosmetologist use (such
       as, 1-pyrrolidone-5-carboxylic acid, capryloyl salicylic
       acid, α-hydroxy decanoic acid, α-hydroxy octanoic
       acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic
       acid, tartaric acid, mandelic acid, benzylic acid, and. . . or even
       higher) dosage forms of such irritants. The irritation attributable to
       combinations of such irritating ingredients, such as lactic acid/
       salicylic acid combinations and hydroxy acid/retinoid
       combinations, as well as irritation attributable to purified isomeric
       forms of such ingredients, can also be.
DETD
                example in which the vehicle has a density of 0.93 g/ml (as in
       a 50:50 [by volume] mixture of 95% ethyl alcohol and
       water) and the cation component is incorporated in the form of strontium
       nitrate (formula weight 212), representative molarity concentration.
DETD
            . components) as water; organic solvents such as alcohols
       (particularly lower alcohols readily capable of evaporating from the
       skin such as ethanol), glycols (such as glycerin), aliphatic
       alcohols (such as lanolin); mixtures of water and organic solvents (such
       as water and alcohol),.
DETD
                skin irritation caused by certain severe skin irritants,
       including particularly lactic acid and glycolic acid (which are hydroxy
       acids), capryloyl salicylic acid (a β-hydroxy
       acid ester) and capsaicin (an isolate from cayenne and paprika known for
       its skin-irritating properties). The trials were.
DETD
            . of the subjects. In the majority of the tests, the irritant
       composition was 7.5% lactic acid dissolved in a 10% ethanol
       -in-water solution.
DETD
               of the irritant composition. Controls were performed by
       applying corresponding formulation(s) (pretreatment and/or skin-irritant
       composition) with an equimolar amount of sodium
       chloride to a contralateral portion of the subject's skin.
       Typically, the test materials were applied to the face of the subject.
DETD
Time Zero Tests
                                     Percent
Cation Anion
                  Salt Formula
                            Vehicle Inhibition
Strontium
        Chloride SrCl.sub.2
                            10% EtOH 58
Strontium
       Nitrate
                  Sr(NO.sub.3).sub.2
                            10% EtOH 64
```

test compounds of the invention were formulated in Elizabeth

DETD

Arden "Visible Difference Refining Toner", with the Toner mixed with equimolar **sodium chloride** serving as the control. The test solutions (and control) were provided in coded vials for application to either the right. . .

- DETD Following a protocol parallel to that of the lactic acid irritant trials described above, glycolic acid (6.0% in 10% ethanol-in-water) was applied as a skin irritant to subject panels. Strontium nitrate was co-administered as an anti-irritant (time zero testing), and. . .
- DETD . . . subject females. The control solution was Vaseline Smooth Legs and Feet Lotion (containing water, lactic acid (5%), glycerin, isopropyl palmitate, PEG-40 stearate, cetyl alcohol, potassium hydroxide, steareth-2, magnesium aluminum silicate, lecithin, soya sterol, tocopheryl acetate, tetinyl palmitate, dimethicone, menthol, camphor, stearic acid, laureth-7, xanthan gum, polyacrylamide, C13-14 isoparaffin, corn oil, fragrance, DMDM hydantoin, iodopropynyl butylcarmamate, disodium EDTA, PG, and.
- DETD . . . (Dow Corning, "DC344"), 7.5 ml cyclomethicone/dimethiconol (Dow Corning, "DC 1401"), 7.5 ml cyclomethicone/dimethicone copolyol (Dow Corning, "DC3225C") and 8 ml PEG-8 and blended for 2-3 minutes. Imidizolidinyl urea (0.5%) was added as a preservative. A clear, thick gel resulted (50 ml).
- DETD . . . of the salt with Mary Kay Revival Serum (with 15% lactic acid) and L'Oreal Vichy Novactia Cream (with 2% capryloyl salicylic acid), respectively.
- CLM What is claimed is:

  14. The composition of claim 11 wherein said irritant ingredient comprises salicylic acid or a salt thereof.
  - 15. The composition of claim 11 wherein said irritant ingredient comprises a combination of lactic acid and **salicylic** acid, or salts thereof.
  - 16. The composition of claim 11 wherein said irritant ingredient comprises capryloyl **salicylic acid** or a salt thereof.
  - .. composition of claim 11 wherein said irritant ingredient comprises one or more of the group consisting of 1-pyrrolidone-5-carboxylic acid, capryloyl salicylic acid,  $\alpha$ -hydroxy decanoic acid,  $\alpha$ -hydroxy octanoic acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic acid, tartaric acid, mandelic acid, benzylic acid, gluconic. . . 22. The composition of claim 11 wherein said irritant ingredient comprises trichloroacetic acid or a salt thereof.
- IT 50-21-5, Lactic acid, biological studies 57-13-6, Urea, biological studies 58-08-2, Caffeine, biological studies 64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7, Salicylic acid, biological studies 76-03-9, Trichloroacetic acid, biological studies 76-93-7, biological studies 77-92-9, Citric acid, biological studies 79-14-1, Glycolic acid, biological studies 87-69-4, biological studies 90-64-2, Mandelic acid 90-80-2 94-36-0, Benzoyl peroxide, biological studies 97-59-6, Allantoin 98-79-3 108-95-2, Phenol, biological studies 116-31-4, Retinal 127-17-3, Pyruvic acid, 144-62-7, Ethanedioic acid, biological studies biological studies 302-79-4, Tretinoin 404-86-4, Capsaicin. 515-69-5,  $\alpha$ -Bisabolol 526-95-4, D-Gluconic acid 617-73-2, α-Hydroxy octanoic acid 1405-86-3, Glycyrrhizic acid 5393-81-7, α-Hydroxy decanoic acid 6915-15-7, Malic acid 70424-62-3 126094-21-1 (strontium compds. for reducing skin irritation due to ingredients in compns.)

```
1998:14485 USPATFULL
AN
ΤI
       Formulations and methods for reducing skin irritation
       Hahn, Gary Scott, Cardiff by the Sea, CA, United States
IN
       Thueson, David Orel, Poway, CA, United States
       Cosmederm Technologies, La Jolla, CA, United States (U.S. corporation)
PA
       US 5716625
                                19980210
PΙ
       US 1994-362100
ΑI
                                19941221 (8)
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Gardner, Salle M.
LREP
       Lyon & Lyon LLP
       Number of Claims: 54
CLMN
ECL
       Exemplary Claim: 1
       25 Drawing Figure(s); 13 Drawing Page(s)
DRWN
LN.CNT 1646
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Topical formulations comprising an anti-irritant amount of
       aqueous-soluble strontium (Sr.sup.2+) cation, and methods for using the
       same to inhibit skin irritation, are disclosed.
AN
       1998:14485 USPATFULL
PΙ
       US 5716625
                                19980210
                                                                      <--
ΑI
       US 1994-362100
                                19941221 (8)
                                                                      <--
SUMM
               which the active drug ingredients are formulated may also
       produce irritation in sensitive people, especially in drugs such as
       topical corticosteroids.
SUMM
               as retinoids (e.g. tretinoin, retinol and retinal), carboxylic
       acids including \alpha-hydroxy acids (e.g. lactic acid, glycolic acid),
       \beta-hydroxy acids (e.g. salicylic acid),
       α-keto acids, acetic acid and trichloroacetic
       acid, 1-pyrrolidone-5-carboxylic acid, capryloyl
       salicylic acid, \alpha-hydroxy decanoic acid,
       \alpha-hydroxy octanoic acid, gluconolactone, methoxypropyl
       gluconamide, oxalic acid, malic acid, tartaric acid, mandelic acid,
       benzylic acid, gluconic.
SUMM
                the irritation caused by such products. Common exfolients
       include \alpha- and \beta-hydroxy carboxylic acids such as lactic
       acid, glycolic acid, salicylic acid and the like,
       \alpha-keto acids such as pyruvic acid, as well as assorted compounds
       such as acetic acid and trichloroacetic acid,
       1-pyrrolidone-5-carboxylic acid, capryloyl salicylic
       acid, \alpha-hydroxy decanoic acid, \alpha-hydroxy octanoic
       acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic
       acid, tartaric acid, mandelic acid, benzylic acid, gluconic.
DETD
                topical application of the hydroxy acid skin irritant lactic
       acid as well as the skin irritants glycolic acid, capsaicin, capryloyl
       salicylic acid, benzoyl peroxide, and
       post-shaving-applied seawater. Formulations containing the strontium
       cation are useful in suppressing a wide range of topical-product-induced
       irritation.
                      . phenols, peroxides and similar irritants found in
       over-the-counter topical products for home or cosmetologist use (such
       as, 1-pyrrolidone-5-carboxylic acid, capryloyl salicylic
       acid, \alpha-hydroxy decanoic acid, \alpha-hydroxy octanoic
       acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic
       acid, tartaric acid, mandelic acid, and benzylic acid),. . . or even
       higher) dosage forms of such irritants. The irritation attributable to
       combinations of such irritating ingredients, such as lactic acid/
       salicylic acid combinations and hydroxy acid/retinoid
       combinations, as well as irritation attributable to purified isomeric
       forms of such ingredients, can also be.
DETD
                example in which the vehicle has a density of 0.93 g/ml (as in
       a 50:50 [by volume] mixture of 95% ethyl alcohol and
       water) and the cation component is incorporated in the form of strontium
       nitrate (formula weight 212), representative molarity concentration.
```

```
. . . components) as water; organic solvents such as alcohols
DETD
       (particularly lower alcohols readily capable of evaporating from the
       skin such as ethanol), glycols (such as glycerin), aliphatic
       alcohols (such as lanolin); mixtures of water and organic solvents (such
       as water and alcohol),. .
DETD
               skin irritation caused by certain severe skin irritants,
       including particularly lactic acid and glycolic acid (which are hydroxy
       acids), capryloyl salicylic acid (a β-hydroxy
       acid ester) and capsaicin (an isolate from cayenne and paprika known for
       its skin-irritating properties). The trials were.
DETD
       . . . of the subjects. In the majority of the tests, the irritant
       composition was 7.5% lactic acid dissolved in a 10% ethanol
       -in-water solution.
DETD
               of the irritant composition. Controls were performed by
       applying corresponding formulation(s) (pretreatment and/or skin-irritant
       composition) with an equimolar amount of sodium
       chloride to a contralateral portion of the subject's skin.
       Typically, the test materials were applied to the face of the subject.
DETD
TIME ZERO TESTS
                                    Percent
Cation Anion
                 Salt Formula
                            Vehicle Inhibition
Strontium
        Chloride SrCl.sub.2
                            10% EtOH
Strontium
       Nitrate
                 Sr(NO.sub.3).sub.2
                            10% EtOH
                test compounds of the invention were formulated in Elizabeth
DETD
      Arden "Visible Difference Refining Toner", with the Toner mixed with
       equimolar sodium chloride serving as the control.
       The test solutions (and control) were provided in coded vials for
       application to either the right.
DETD.
       Following a protocol parallel to that of the lactic acid irritant trials
       described above, glycolic acid (6.0% in 10% ethanol-in-water)
      was applied as a skin irritant to subject panels. Strontium nitrate was
       co-administered as an anti-irritant (time zero testing), and.
DETD
         . . subject females. The control solution was Vaseline Smooth Legs
       and Feet Lotion (containing water, lactic acid (5%), glycerin, isopropyl
      palmitate, PEG-40 stearate, cetyl alcohol, potassium
       hydroxide, steareth-2, magnesium aluminum silicate, lecithin, soya
       sterol, tocopheryl acetate, tetinyl palmitate, dimethicone,
      menthol, camphor, stearic acid, laureth-7, xanthan gum,
      polyacrylamide, C13-14 isoparaffin, corn oil, fragrance, DMDM hydantoin,
       iodopropynyl butylcarmamate, disodium EDTA, PG, and.
DETD
              cyclomethicone (Dow Corning, "DC344"), 7.5 ml
       cyclomethicone/dimethiconol (Dow Corning, "DC1401"), 7.5 ml
       cyclomethicone/dimethicone copolyol (Dow Corning, "DC3225C") and 8 ml
      PEG-8 and blended for 2-3 minutes. Imidizolidinyl urea (0.5%)
      was added as a preservative. A clear, thick gel resulted (50 ml).
              of the salt with Mary Kay Revival Serum (with 15% lactic acid)
DETD
      and L'Oreal Vichy Novactia Cream (with 2% capryloyl salicylic
```

13. The composition of claim 1 wherein said irritant ingredient

comprises salicylic acid or a salt thereof.

acid), respectively.

What is claimed is:

CLM

- 14. The composition of claim 1 wherein said irritant ingredient comprises a combination of lactic acid and **salicylic** acid, or salts thereof.
- 15. The composition of claim 1 wherein stud irritant ingredient comprises capryloyl **salicylic acid** or a salt thereof.
- . composition of claim 1 wherein said irritant ingredient comprises an ingredient selected from the group consisting of 1-pyrrolidone-5-carboxylic acid, capryloyl **salicylic acid**,  $\alpha$ -hydroxy decanoic acid,  $\alpha$ -hydroxy octanoic acid, gluconolactone, methoxypropyl gluconamide, oxalic acid, malic acid, tartaric acid, mandelic acid, benzylic acid, gluconic. . . 21. The composition of claim 1 wherein said irritant ingredient comprises **trichloroacetic acid** of a salt thereof.
- IT 50-21-5, Lactic acid, biological studies 57-13-6, Urea, biological 58-08-2, Caffeine, biological studies 64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7, Salicylic acid, biological studies 76-03-9, Trichloroacetic acid, biological 76-93-7, biological studies 77-92-9, Citric acid, biological 79-14-1, Glycolic acid, biological studies 87-69-4, Tartaric acid, biological studies 90-64-2, Mandelic acid 90-80-2, 94-36-0, Benzoyl peroxide, biological studies Gluconolactone 98-79-3 108-95-2, Phenol, biological studies 116-31-4, Allantoin 127-17-3, Pyruvic acid, biological studies 144-62-7, Oxalic acid, biological studies 302-79-4, Tretinoin 515-69-5, α-Bisabolol 526-95-4, Gluconic acid 543-94-2, Strontium acetate 617-73-2,  $\alpha$ -Hydroxyoctanoic acid 1405-86-3, Glycyrrhizic acid 5393-81-7,  $\alpha$ -Hydroxydecanoic acid 6915-15-7, Malic acid 7759-02-6, Strontium sulfate 7440-24-6, Strontium, biological studies 10476-85-4, Strontium chloride 10042-76-9, Strontium nitrate 70424-62-3 126094-21-1

(strontium cation formulations for reducing skin irritation)

```
L130 ANSWER 7 OF 8 USPATFULL on STN
       90:61429 USPATFULL
AΝ
TI
       Delivery systems for pharmaceutical or therapeutic actives
IN
       Partain, III., Emmett M., Bound Brook, NJ, United States
       Brode, II., George L., Bridgewater, NJ, United States
       Union Carbide Chemicals and Plastics Company Inc., Danbury, CT, United
PΑ
       States (U.S. corporation)
PΙ
       US 4946870
                               19900807
                                                                     <--
ΑI
       US 1988-268871
                               19881108 (7)
                                                                     <--
       Continuation-in-part of Ser. No. US 1988-189312, filed on 3 Feb 1988
RLI
       which is a continuation-in-part of Ser. No. US 1986-871381, filed on 6
       Jun 1986, now abandoned
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Griffin, Ronald W.
       Gibson, Henry H.
LREP
CLMN
       Number of Claims: 17
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 895
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
```

AB Delivery systems containing at least one aminopolysaccharide derivative are provided for the delivery of pharmaceutical or therapeutic actives to a desired topical or mucous membrane site in a subject, and wherein upon delivery, the systems provides a biocompatible, substantive, gas permeable, film from which actives are available at the designated site.

AN 90:61429 USPATFULL

PΙ US 4946870 19900807 <--US 1988-268871 AΤ 19881108 (7) <---SUMM is insoluble, and in which the aminopolysaccharide derivative is insoluble. Illustrative organic compound which can be employed include acetone, methanol, ethanol, n-propanol, isopropanol, tertiary butyl alcohol, acetonitrile, tetrahydrofuran, dioxane, 2-ethoxyethanol, dimethoxyethane, and the like. SUMM . . . polymer is prepared by reacting a finely ground slurry of chitosan with PCA in a polar solvent such as aqueous ethanol, or other suitable solvent that will dissolve PCA. As indicated in the parent applications, chitosonium pyrrolidone carboxylate has a large. SUMM method for preparing chitosan salts is applicable to other organic acids that are soluble in polar organic solvents such as ethanol. For example, glycolic acid in aqueous ethanol can be reacted with chitosan to give the glycolate salt, which is also useful as a delivery system. SUMM Anti-inflammatory analgesics such as salicylic acid, salicylate esters and salts, acetylsalicylic acid, diflunisal, acetaminophen, phenylbutazone, oxyphenbutazone, sulfinpyrazone, indomethacin, sulindac, fenoprofen, flurbiprofen, ibuprofen, ketoprofen, naproxen, mefenamic acid,. SUMM Anti-inflammatory corticosteroids such as progesterone, hydrocortisone, prednisone, fludrocortisone, triamcinolone, dexamethasone, betamethasone, fluocinolone, and the like. SUMM Kerolytic agents such as benzoyl peroxide, salicylic acid, trichloroacetic acid, and piroctone, and wart treatment compounds such as salicyclic acid, trichloroacetic acid and lactic acid, singularly or in combination with anti-viral agents. . percent of the system with the remainder being a diluent and SUMM optionally, other additives. Suitable diluents include among others, water, ethanol, aqueous ethanol, isopropanol, glycerine, dimethylether, carbon dioxide, butane, polyethylene glycol, ethoxylated or propoxylated glucose, sorbitol derivatives, and the like. SUMM the present invention the active or actives are dissolved or suspended in an appropriate solvent or diluent such as water, ethyl alcohol, isopropyl alcohol, diethylether, dimethylether, acetone, ethyl acetate, or mixtures thereof, and mixed with a solution or suspension of the desired. . . Other adjuvant ingredients such as glycerine, propylene glycol, sorbitol, preservatives, stearic acid, cetyl alcohol, other high molecular weight alcohols, surfactants, menthol, eucalyptus oil, other essential oils, fragrances, penetration enhancers, and the like to give stable cremes, ointments, lotions, aerosols, solutions, may. SUMM In the following examples, distilled water and absolute ethanol were used as indicated. The active is dissolved in alcohol or alcohol/water, and mixed with an aqueous solution of the. DETD . was prepared and mixed with chitosan in varying ratios. 3.36 g of PCA was dissolved in 75 ml of absolute ethanol. Three 125-ml Erlenmeyer flasks were charged with 2.5 g of 0.5 mm mesh chitosan having a degree of deacetylation of. . . ml of the alcoholic PCA solution were added to each, respectively, and the slurry diluted to 50 ml with absolute ethanol. Each slurry was stirred for 2 hours. The molar ratios of the three solutions were respectively 1:1, 0.67:1, and 0.33:1. DETD The three 2.5 g recovered chitosan samples were combined and placed in a 250-ml beaker with 100 ml of 95% ethanol (7.5 g in 100 ml). DETD 3.5 g of PCA were dissolved in 16 ml of water, and the acid solution was added to the ethanol slurry of chitosan (7.5 g). The chitosan

became swollen and curd-like. The slurry was stirred for a few minutes,

- and 80 ml of 95% ethanol were added. The curd-like polymer precipitated, and the slurry was vacuum-filtered. By the consistency of the polymer, recovery could be. . .
- DETD . . . (degree of deactylation about 0.80, ground to 0.5 mm) and 25 ml of isopropanol. A solution of 2.45 g of salicylic acid and 24 ml of isopropanol was added to the slurry, followed by 15 ml of water. The slurry began to. . .
- DETD 0.20 g of minoxidil and 0.12 g of nicotinic acid are dissolved in a solution of 3.0 g of ethanol and 1.7 g of water. 5.0 g of 2.0% chitosonium niacinate in 90:10 water/ethanol are added, and after vigorous mixing, a clear colorless solution was obtained which is useful as a scalp/hair lotion to. . .
- DETD 0.15 g of ethyl 4-aminobenzoate (benzocaine) are dissolved in 3.85 g of ethyl alcohol and 1.0g of water. 5.0 g of 2.0% aqueous chitosonium pyrrolidone carboxylate are added, and after vigorous mixing, a clear, . . .
- DETD 0.055 g of chloamphenicol are dissolved in 2.0 g of ethyl alcohol and 2.95 g of water. 5.0 g of 2.0% aqueous chitosonium pyrrolidone carboxylate are added, and after vigorous mixing, a.
- DETD 0.027 g of sulfadiazine are dissolved in 4.73 g of ethyl alcohol, and mixed with 5.0 g of 2% aqueous chitosonium pyrrolidone carboxylate, giving a clear colorless solution (0.27% sulfadiazine). Sulfadiazine is. . .
- DETD 0.06 g of miconazole nitrate are dissolved in 4.5 g of ethyl alcohol and 0.44 g of water, and mixed with 5.0 g of 2% chitosonium pyrrolidone carboxylate in 90:10 water/alcohol, giving a.
- DETD Preparation of chitosan-based corticosteroid lotion
  0.013 g of hydrocortisone are dissolved in 4.99 g of ethyl
  alcohol, and mixed with 5.0 g of 2% aqueous chitosonium
  pyrrolidone carboxylate, giving a clear, colorless solution. This
  solution (0.13% hydrocortisone) is useful in the topical treatment of a
  variety of local inflammatory diseases and pruritis. Substituting 0.015
  g of dexamethasone for 0.013 g of hydrocortisone in this
  formulation yields a clear, colorless solution of 0.15%
  dexamethasone, a fluorinated steroid, also used in the treatment
  of topical inflammatory diseases and general inflammation.
- DETD 0.50 g of ibuprofen are dissolved in 4.5 g of ethyl alcohol, and mixed with 5.0 g of 2% chitosonium niacinate in 90:10 water/alcohol, giving a clear, colorless solution (5.0% ibuprofen). This. . .
- DETD 0.01 g of retinoic acid are dissolved in 4.99 g of ethyl alcohol, and mixed with 5.0 g of 2% aqueous chitosonium pyrrolidone carboxylate, and vigorously shaken. With trans-retinoic acid (0.1% retinoic acid). . .
- Preparation of chitosan-based topical antioxidant 0.02 g of alpha-tocopherol are dissolved in 6.0 g of ethyl alcohol, and mixed with 4.0 g of 2% aqueous chitosonium salicylate to give a translucent, opalescent, homogeneous white fluid. This lotion. . .
- DETD 2.0 g of salicylic acid are dissolved in 5.0 g of ethyl alcohol and mixed with 3.0 g of 10% aqueous chitosonium salicylate (very low molecular weight, 1% solution=5cP at 20° C.) to give a clear, colorless solution of 20% salicylic acid. This solution is useful as a kerolytic lotion for the treatment of acne, psoriasis, and similar skin diseases.
- DETD 0.05 g of erthromycin and 0.009 g of 2-pyrrolidone-5-carboxylic acid are dissolved in 5.00 g of absolute ethanol. 5.00 g of 2.0% aqueous chtiosonium pyrrolidone carboxylate are added, and after vigorous mixing, a clear, colorless solution is obtained,. . .
- DETD Preparation of a chitosan-based corticosteroid lotion
- DETD 0.0225 g of triamcinolone acetonide are dissolved in 4.99 g of ethyl alcohol and mixed with 5.09 g of 2% aqueous

chitosonium lactate, giving a clear, colorless solution. This solution (0.225% triamcinolone acetonide) is useful in the topical treatment of a variety of local inflammatory diseases. IT 50-21-5DP, DL-Lactic acid, aminopolysaccharide salts 50-78-2DP, aminopolysaccharide salts 50-81-7DP, L-Ascorbic acid, 56-84-8DP, L-Aspartic acid, aminopolysaccharide salts aminopolysaccharide salts 56-86-0DP, Glutamic acid, aminopolysaccharide salts 59-67-6DP, Nicotinic acid, aminopolysaccharide salts 64-18-6DP, Formic acid, aminopolysaccharide salts 64-19-7DP, Acetic acid, aminopolysaccharide salts 68-11-1DP, Thioglycolic acid, aminopolysaccharide salts 69-72-7DP, aminopolysaccharide salts 74-87-3DP, Methyl chloride, reaction products with chitosan 75-00-3DP, Ethyl chloride, reaction products with chitosan 75-21-8DP, Oxirane, reaction products with chitosan 75-56-9DP, reaction products with 79-11-8DP, Chloroacetic acid, reaction products with chitosan 79-14-1DP, Glycolic acid, aminopolysaccharide salts 97-65-4DP, aminopolysaccharide salts 98-79-3DP, 2-Pyrrolidone-5-carboxylic acid, aminopolysaccharide salts 110-15-6DP, Butanedioic acid, aminopolysaccharide salts 110-16-7DP, Maleic acid, aminopolysaccharide salts 110-17-8DP, 2-Butenedioic acid (E)-, aminopolysaccharide salts 110-94-1DP, Glutaric acid, aminopolysaccharide salts Sulfonyldiacetic acid, aminopolysaccharide salts Thiodiacetic acid, aminopolysaccharide salts 127-17-3DP, aminopolysaccharide salts 141-82-2DP, Malonic acid, aminopolysaccharide 142-73-4DP, Iminodiacetic acid, aminopolysaccharide salts 543-24-8DP, N-Acetylglycine, aminopolysaccharide salts 638-32-4DP, Succinamic acid, aminopolysaccharide salts 6915-15-7DP, DL-Malic acid, aminopolysaccharide salts 50744-78-0DP, reaction products with chitosan (preparation of, for pharmaceutical, cosmetic, and fluid separation membrane uses) L130 ANSWER 8 OF 8 USPATFULL on STN AN89:82643 USPATFULL TI 2-Trichloroacetoxy-3,4,5,6-tetrachlorobenzoic acid and compositions containing same for treating benign mammalian neoformations Fedeli, Gianfranco, Milan, Italy IN Diamantini, Giuseppe, Fano, Italy Djaczenko, Wiktor, Rome, Italy Strumillo, Maria, Rome, Italy PΑ Djaczenko, Wiktor, Rome, Italy (non-U.S. individual) Strumillo, Maria, Rome, Italy (non-U.S. individual) PΙ US 4871769 19891003 ΑI US 1987-11468 19870205 (7) RLI Continuation-in-part of Ser. No. US 1985-815092, filed on 9 Dec 1985, now abandoned PRAI IT 1984-48046 19840416 DTUtility FS Granted EXNAM Primary Examiner: Moyer, Donald B.; Assistant Examiner: Parker, Julie K. LREP Beveridge, DeGrandi & Weilacher CLMN Number of Claims: 10 Exemplary Claim: 1,2 ECL. DRWN 4 Drawing Figure(s); 3 Drawing Page(s) LN.CNT 382 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Tetrachlorobenzoic acid derivative having the formula: ##STR1## AB (2-trichloroacetoxy-3,4,5,6-tetrachlorobenzoic acid), chemotherapeutically active against cutaneous and subcutaneous beniqn neoformations, process for its preparations and compositions containing the same. IN Djaczenko, Wiktor, Rome, Italy

IN

Strumillo, Maria, Rome, Italy

## => d his

L38

1 S 112-60-7

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                E DJACZENKO/AU
L2
             38 S E4, E5
                E STRUMILLO/AU
              3 S E8, E12
L3
                E FAVA D/AU
L4
              5 S E3-E5
L5
             14 S 5 METHYL 2 1 METHYLETHYL CYCLOHEXANOL
L6
              2 S L5 AND 1 ALPHA 2 BETA 5 ALPHA
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rs
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L9
            213 S L8 AND CYCLOHEXANOL
L10
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L11
             17 S L10 AND 2 1 METHYLETHYL
L12
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L13
             16 S L7, L12
L14
             14 S L10 NOT L13
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L20
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L22
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L23
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L24
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L25
             29 S L20 AND L23, L24
L26
          24150 S L22
          60605 S 2() (HYDROXYBENZOIC OR HYDROXY BENZOIC) () ACID OR 2() (HYDROXYBE
L27 '
L28
            523 S L20 AND L26, L27
L29
              7 S L25 AND L28
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L30
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L34
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L35
              8 S L29, L34
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L42
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              1 S L35 AND (PEG OR POLYETHYLENEGLYCOL OR POLYETHYLENEOXIDE OR PO
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L46
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L47
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L48
              1 S L35 AND (TRIAMCINOLON? OR BETAMETHASON? OR BETA METHASON? OR
L49
              5 S L35 AND (ETOH OR ETHANOL OR ETHYLALCOHOL OR ETHYL ALCOHOL)
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L53
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L54
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L56
L57
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L58
              4 S L56 AND 69-72-7/CRN
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L60
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L61
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L63
           3577 S L19/BIX
                E MENTHOL/DCN
                E E3+ALL
L64
           1258 S E2 OR 0557/DRN
L65
            298 S E4
L66
              1 S L62 AND L64, L65
                E R14648+ALL/DCN
                E R07025+ALL/DCN
L67
           3992 S L62-L66
L68
              2 S L67 AND L24/BIX
L69
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                E TRICHLOROACETIC ACID/DCN
                E E3+ALL
L70
              0 S L67 AND E4
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L72
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                E E3+ALL
L73
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L74
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L77
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L80
              0 S L67 AND E18
L81
             1 S L67 AND E20
L82
              0 S L67 AND E22
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            8 S L67 AND E30
L86
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L87
             1 S L67 AND E36
L88
            5 S L67 AND E38
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L90
          181 S L67 AND (R02044/DCN OR 2044/DRN)
L91
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L94
L95
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           236 S L67 AND (R00245 OR R01706)/DCN
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L104
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L108
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L109
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L111
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L112
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L113
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             6 S L124, L126
L127
            16 S L122 NOT L123
L128
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L130
             8 S L127, L129 AND L102-L129
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